Polaroid

ID Card Maker

The complete software solution for Polaroid digital photo ID Systems

Version 4.02M

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ID Card Maker

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CHAPTER 1

Introduction

What is ID Card Maker?

Welcome to ID Card Maker, the world's leading software for the creation of digital photo ID badges! ID Card Maker combines database, badge design, image capture, point-and-click hardware setup, and badge printing all from within one user-friendly interface.

ID Card Maker comes in three versions: Level I, Level II, Level III. The difference between them is the absence or presence of "features", which add functionality to ID Card Maker versions. Level I is the lowest and level III is the version with the most features.

The features are controlled by the "security key" or "dongle" that comes with your software. The dongle plugs into the printer port on your computer, and a USB version is also available. The software will not work without it. The keys are clearly marked "Level I", "Level II", and "Level III".

As you read this manual, you may see screenshots or read about features of ID Card Maker that are different from what you see on your own monitor. That is because you are running a different level key with features that are not present. We have tried to indicate clearly through use of icons in the margins of this manual which application features are associated with which "levels." ”

Here is a brief description of what this software package has to offer:

Database

- Based on Microsoft Access 2000, ID Card Maker can store up to 100,000,000 records
- Attach to ODBC databases
- Personal information is entered in standard text fields using Windows' "point and click" interface
- User-definable database fields
- Perform searches for single records or groups of records
- Create completely customized reports of your data
- Import and export data to and from another database file
- "Repair and compact" utilities included for database integrity
- User accounts and passwords for database security
- More...

Badge Design

- Design badges in a "What You See Is What You Get" (WYSIWYG) window
- Badges are printed exactly the way they appear in the design window
- A "Toolbar" for quick access to commonly used commands
- Image "ghosting" and "see through"
- Unlimited badge designs
- Export card layouts
- PDF417 2D bar code
- Datastrip Superscript 2D bar code
- Single- or double-sided badge design
- Rotation of text, images, bar codes, and badge
- Up to 300% ZOOM in the design window
- Create Rosters with text, photos, headers and footers
- More...

Image Capture and Display

- Capture portraits, fingerprints, and/or signatures
- Import images
- Images are immediately available for preview and printing
- Images accessible to other applications
- Up to 30 images per record, and use all images in badges and rosters

Hardware Setup

- Use any TWAIN or Video for Windows input device
- Use any PVC card or Sheet printer, which uses a Windows printer driver
- Point and click configuration of hardware options

Badge Printing

- Print badges at the click of a button
- One-at-a-time or Batch printing
- Sheet printing

Optional add-on modules

- Expert Image Export (export select images)
- Expert Data Export (export data from select fields and for selected records)

Minimum Requirements

Please verify that your computer meets the following requirements before installing ID Card Maker:

Operating System: You must be running Windows 98/2000/XP, or NT 4.0 (does not support USB).

CPU (central processing unit): You must have a Pentium-level CPU running at 400 MHz or higher (for 2000/XP Operating Systems).

RAM (random access memory): You must have a minimum of 128 megabytes of RAM. Best results are obtained with 256 megabytes or more.

Hard Disk Space: You must have up to 90 megabytes of free hard disk space depending on which installation options you choose.

- *ID Card Maker* requires approximately 45 megabytes of disk space. In addition, extra disk space is required to store individuals' images. Typically, a single portrait is 10K-12K. Therefore, if you have 500 individuals, you will need an additional 5,000K-6,000K of disk space—or 5-6 megabytes—to store their portraits. Storing fingerprint and signature images requires additional disk space.
- *ID Card Maker* uses a "runtime" version of Microsoft Access 2000 as its database engine. If you do not already have the "runtime" version of Access, the installation wizard will install this 43 megabyte application. Backup your database regularly.
- *ID Card Maker on-line User Manual* (in PDF format) requires approximately 2 megabytes of disk space.

Video Capture Card: While some cameras connect to your computer through a serial or Universal Serial Bus (USB) port, others require you to install a separate video capture card. Consult your camera's documentation.

CD ROM: ID Card Maker only installs from a CD. Your PC must have a CD ROM drive.

Keyboard and Mouse

What's On the CD

The ID Card Maker CD contains:

- *The ID Card Maker application and Access Runtime files*. Installing this application will copy all the files needed to run our photo ID badging system.
- *On-line User Manual*. This manual has been converted to a Portable Document File (PDF). Once installed onto your computer, you can read the "electronic" version of this manual. If you do not have Adobe's free Acrobat Reader, you may also install this from the CD.

- The ID Card Maker What's New document.

When you run ID Card Maker's Setup Wizard on the CD, you will be presented with the option to install any or all of these components.

What's New In Version 4

Security

History Included On Every Version. When given permission to view badge history, all levels of users can now see when badges were issued and badge status. Users can also view and print all badge history.

When viewing data history or record events, customers can now view and print out the date an event occurred, the workstation that was used, who the operator was, the operation he/she performed and a description of the operation.

Viewing Image History. In the IDServer setup window there is a box that allows the user to enter, between 0 and 9, the number of old history images to keep. Users can then view them on the personal data form by right clicking a displayed image that has a history.

Installing Wasp Barcode Fonts. Wasp barcode fonts can now be installed and are automatically activated after the initial install.

Wasp Codabar/Mod 10 for Barcode Encoding. In the barcode properties of IDLayout, the Wasp Codabar/Mod 10 is added to the dropdown encoding selection.

Mod 10 Check Digit for Barcode Encoding. In the barcode properties of IDLayout, the Mod 10 check digit is added to the dropdown encoding selection.

Database

Keyless Demo. IDCM demos are now available without a key. Once installed, users can run IDCM in a keyless demo mode. In demo mode, all badges will have a watermark with the word "demo" written across them.

Text Data Now allowed In Importing. Users can now import/export from both .csv and .txt extension files.

Default Database. IDCM now has an updated simple default database that allows users to quickly install a working application with sample layouts, enrollment fields and reports.

Sample Databases and Card Layouts. There are now multiple application-specific and vertical application sample databases and card layouts available. These files are located in a separate folder on the CD and are not automatically installed with the application.

Modifying Database Structure over the Network. When creating a new database over the network, an error 'file in use' would appear. This happened only over the network and it is now fixed.

IDNumber in Advanced Imports. Previously, advanced import into SQL or other ODBC databases required an IDNumber whereas the equivalent MS Access did not. This restriction has been removed and the import automatically assigns the appropriate values for the IDNumber.

IDServer Box. The IDServer box no longer will pop up in front of the User Interface window.

IDSetup Changed in IDServer. IDSetup.exe has been changed to fix the problems created when a directory or database name contained spaces.

Messages Changed To Be More User Friendly. The language in the database management form is less technical, making it easier to understand and more user-friendly.

Imaging

Automatically Display Images. The 'automatically display images' check box is now enabled for level I and II users, giving small to medium businesses the option to display the images they acquired.

Select Different Images. Users can now select different image sources on the fly to speed the enrollment process. Simply hold down the 'Alt' key and simultaneously select the primary image source on the capture instance form. This will enable the user to switch to get-from-file without having to go through the IDServer setup.

Direct Interface with Polaroid 2150 Digital and Logitech QuickCam Cameras. This feature allows the camera to be controlled via the software, enabling the user to speed enrollment, while saving time and money.

Polaroid Olympus Camera Capture Interface. A DDIShell.exe capture interface was written specifically to work with IDCM. This capture interface is automatically installed and ready to use with the Polaroid Olympus camera.

Flashpoint Capture Routines. A flashpoint capture routine now allow images up to 640 x 480 to be captured and provides a greater range for panning. This allows the frame grabber camera to move the interface to all sections of the captured image for better selection.

Flashbus90 Interface. The flashbus90 interface allows the frame grabber camera to be mounted on its side to capture an image 480 wide x 640 tall instead, enabling a higher resolution portrait picture. This also allows greater vertical panning instead of the horizontal default.

Crop Current Image Interface . When acquiring an image in IDServer there is now a "crop current image" interface window that allows the captured image to be cropped and enhanced.

Cropping Mode When Capturing Image. Each time an image is captured, the image cropping box will open to modify that image. This feature was previously set to 'automatic' which would bypass the cropping window if the image had the correct aspect ratio. The cropping box will no longer be bypassed; it will always open.

Image Capture of Small Image. If an acquired image's natural size is less than half the height of the screen, the cropping window will zoom the image 2 to 1 or 3 to 1 if necessary.

Rotate Image in Cropping Window. When acquiring an image via TWAIN, Video for Windows, direct scan or 'get from file', there are now two buttons in the cropping window that allow rotation of the image either clockwise or counter clockwise.

Reducing Resolution in Cropping Window. When acquiring an image, cropping will also reduce the resolution to avoid creating an image with a higher resolution than requested in IDSetup.

Newly Supported Image Files in IDServer. When acquiring images in 'get from file', PIC and PCT image files are now supported.

Badge Layout

Barcode Field In IDLayout. When selecting a barcode in IDLayout, an 'IDLayout-New badge Object' window opens. Inside this window is a dropdown box called 'Name of Database Field containing the Barcode Text'. The 'Barcode' option has been added back to the dropdown box as a field selection.

Test Print In IDLayout. When creating new card formats or modifying existing ones, users may test print card layouts. This enables users to ensure that the background, text, and image boxes are accurately placed.

Solid Box feature In IDLayout. The solid box feature can be added behind an existing object or text on a card design and will wrap itself around the object or design like a picture frame. Or, the box can be created first so the added text will automatically adjust to fit inside the box. This feature is now available on all levels of IDCM.

New Apply Button in IDLayout. The image and text dialog boxes in IDLayout now have an 'apply' button to allow the customer to save changes without the dialog box closing.

IDLayout Expression Builder. When selecting a new image or text badge object in IDLayout, there is a dropdown box that allows users to select name of the database field containing the image or text file name. If selecting the equal sign (=), a button with an arrow appears on the right hand side of the box. This will open an edit expression window. When adding expression editing options to the expression box located at the top of the window, the expression builder used to fail to display in this box using Windows XP. The expression box has now been modified and will display under all windows platforms.

More Seamless Software Installation

Software Installation. To make it easier for users to install IDCM, there is now an automatic install of the Access 2000 runtime and USB hardware key driver.

Camera/Printer/Settings Defaults On Setup. When IDCM is being installed, the customer can select a printer and/or camera configuration.

Install Process For USB Key. The option to use a USB key instead of a parallel key is now integrated with the install process.

New Default Install Path. The default install path has now been changed from C:\ITC to C:\IDCM for new installations.

Other Features

IDCM Includes Education Functionality. Education level I functionality is now in IDCM level II. Education level II is now in IDCM level III.

Shortcut From Personal Data Form. When right clicking on the back button in the personal data form, a short cut window opens. This window allows users to go directly to and from the IDLayout screen, IDSetup window or the configuration form. Previously, if the database had been recently modified and the shortcut to IDLayout was selected, the field list was not updated. This has now been fixed to reflect the current field list.

Release Notes Available. Polaroid Commercial ID Systems will place updated release notes on the Polaroid-ID.com website when available to help end users better understand new and existing features.

Compatibility List. A compatibility list for all databases and drivers that have been tested with IDCM v4.02M is available.

Larger Control Window. Since the trend is toward longer field names, the control window has been stretched from 1 to 2 inches long.

IUpdated Topaz Driver. There is now an updated driver, SigPlus.exe, in the installation process for the Topaz signature pad. The previous driver TopazSetup.exe is now obsolete.

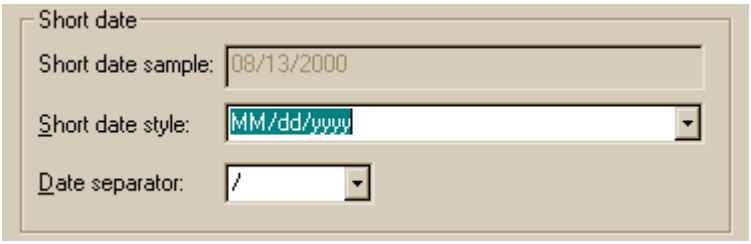
Updated Acrobat Reader. Acrobat version 5 will be installed if there are no applications associated with the .pdf extension.

Updated Rainbow Driver. The install process now includes an updated version for the Rainbow Key USB driver (version 4.51).

Year 2000 Compliance

ID Card Maker is Year 2000 compliant, but only if the following setting has been made:

Go to Windows Control Panel folder (Start➲Settings➲Control Panel) and double-click Regional Settings. Click the Date tab. Select MM/dd/yyyy for the Short date style. You must now use four-digit year dates in all ID Card Maker date fields.



CHAPTER 2

Installation

ID Card Maker uses a “wizard” to guide you through the steps for installing the software. Note: If you intend to install ID Card Maker in a networked environment, each computer must “map” the shared network drive onto which certain files must be copied before installation. (Your Network Administrator must create a network directory which will contain the database and image files, and assign full Read, Write, and Delete privileges to it. Though the Administrator may name this directory anything, for simplicity’s sake, we suggest you name it “IDCM”.)

To “map” the drive, perform these steps:

1. Double-click the “Network Neighborhood” icon on your desktop. All available network resources are displayed.
2. Double-click the workstation/file server where your Network Administrator created the shared directory, then right click on the folder representing the hard disk.
3. Choose “Map Network Drive” from the pop-out menu. Allow Windows to assign a drive letter, and ensure that “Reconnect at logon” is checked.

Note to Windows NT, 2000, and XP users: Before you install ID Card Maker, you must log on to Windows with full Administrator privileges. If you do not log on with Administrator privileges, required software keys will not be written to Windows’ registry and ID Card Maker will not operate properly.

To install ID Card Maker, perform these steps:

1. Insert the ID Card Maker CD in your CD ROM drive. If "auto insert notification" is enabled in the Device Manager tab of your System control panel, ID Card Maker's installation wizard will automatically begin. If the installation wizard does not begin automatically, open Windows Explorer and browse the ID Card Maker CD. Double-click on the file named "Setup.exe."
2. Follow the on screen prompts.
3. You will be prompted to select a "Network" check box if you wish to install ID Card Maker in a networked environment. If you check that option, enter the drive letter and path to the directory your network administrator created earlier.

4. A Select Printer dialog box appears. Select from the options. If your printer will not be connected to LPT1, select the option None of the above. Click Next.
5. A Select Camera dialog box appears. The default is PDC2150. Click Next.
6. Repeat steps 1-3 at every workstation on which you will run ID Card Maker. At subsequent workstations, the setup wizard will detect that the ID Card Maker database has already been installed on the network drive. You will be prompted to overwrite the database. Click "No" at that prompt—do not overwrite the database. Proceed as usual.
7. You received a "security key" with your software - either a USB key or a parallel port key. Follow the installation instructions below for your specific key:

- USB - Attach a USB key to any available USB port on each computer running ID Card Maker.
- Parallel Port - Attach a parallel port key to the LPT1 parallel printer port for each computer running ID Card Maker.

If your printer is currently connected to your computer's LPT1 port, unplug the printer's cable and attach the security key in its place. The security key has a female connector at one end and a male connector at the other. It will only attach to your computer one way. The printer's cable may now be reattached to the back of the security key. *(Note: ID Card Maker also may not work if your printer is plugged into the security key and the printer's power is OFF. Either attach your printer to another parallel port, or always keep your printer's power ON when using the ID Card Maker software.)*

Note: Each "security key" has a unique serial number. After you install ID Card Maker, the serial number of the key can be displayed by pulling down the HELP menu in any application window and selecting ABOUT.)

The setup wizard will create a program folder and program icons for ID Card Maker in the Programs section of Windows' START button.

While you are now ready to begin using ID Card Maker, it will not be optimized for use until you have set some program preferences and instructed the program to use your specific cameras and printers. Therefore, first-time users should carefully read the next chapter, "Tools," before continuing.

Note: When you launch ID Card Maker, you are presented with an initial Logon window. The User Name and Password fields are disabled; a short message in the body of the Logon window explains that "logon" is disabled until a user account with "System Administrative" privileges is created. See "User Accounts" on page 21.

CHAPTER 3

Setting Up IDCM (Tools Form)

You arrive at the Tools window by clicking TOOLS in the Search window.

The Tools window is where ID Card Maker's "tools" are located, e.g., importing and exporting databases, designing badge layouts, setting application preferences, etc. The following window appears allowing access to different application functions:

Tools Window

BACK	Returns you to ID Card Maker's "home" page.	
IMPORT	Opens a standard Windows Open dialog to navigate to a text file containing data exported from another database. ID Card Maker will import all the data. (See "Importing" on page 83.)	
ADVANCED IMPORT	Takes you to an Advanced Import window in which you have a variety of options for importing or updating data in your database. You may import from either a text file or directly from a Microsoft Access database. Text and/or Images. (See "Advanced Import" on page 85.)	
EXPORT	Will export the entire database (text only) to a comma-delimited ASCII text file. (See "Exporting" on page 95.)	
EXPORT SELECTED RECORDS	Allows you to export a specified set of records to a comma delimited ASCII text file. The EXPORT DELIMITED TEXT file button is disabled until you tell ID Card Maker which records you want to export. Use the SELECTION FROM REPORT LIST BUTTON immediately below to do this. Selection specification is a "pick list" displaying the names of your Reports. (See "Exporting a Group of Records" on page 96.) Selecting a Report from this list will use its query to specify which records will be exported.	
BADGE LAYOUT	Opens a "badge design" window in which you may create your ID badges in a graphical window. (See "Badge Design" on page 97.)	
EDIT USER ACCOUNTS	Takes you to a User Permission window in which you create "user accounts"—user names, passwords, and application privileges. (See "User Accounts" on page 21.)	

REPORTS	Takes you to a Reports window in which you may create, edit, and print reports. (See “Reports” on page 129.)
CONFIGURATION	Takes you to a Configuration window where you may configure your application options. (See “Configuring IDCM” on page 27.)
PRINT QUEUED BADGES	Will immediately print the contents of the “print queue.” (If you selected “Batch print” and “Always queue” in the Printer Options Dialog of ID Server Setup, clicking a record’s PRINT button sends the badge to the print queue instead of to the card printer. See “Printers” on page 52.)
DATA HISTORY	Takes you to a Data History window where you may view a log of record and application events. (See “Data History” on page 135.)
ADD-INS	Opens a selection window allowing you to launch custom “mini-applications” which add functionality to ID Card Maker. (Add-ins may be present in the higher versions of our software, and may be purchased and installed separately for the lower versions.)

Though you may access and use any of the tools at any time, you will want to visit several areas first in order to optimize ID Card Maker for your personal use:

- User Permissions (to create “user accounts” and set application “permissions”)
- Configuration (to set program preferences)
- ID Server Setup (for camera and printer setup)
- Database Management (to modify database fields)
- IDLayout (to design badges)

The chapter sections which follow will describe each of these program areas.

Section 3.1

User Accounts

You arrive at the User Permissions window by clicking TOOLS➲EDIT USER ACCOUNTS.

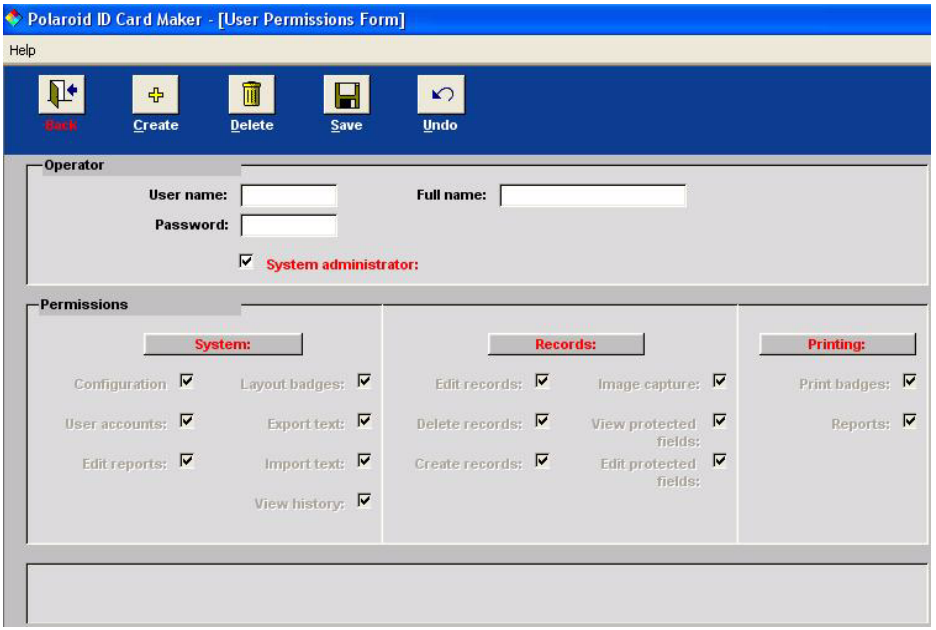
User Permissions and Passwords

Through its use of a secure logon, ID Card Maker allows you to have control over who is able to access the ID Card Maker application. This prevents unauthorized users from creating, editing or printing badges and reports. The following is intended for those few individuals who will have permission to create "user accounts."

A record is created in a hidden table for each authorized "user" of ID Card Maker; a "user name," initial "password," and "access options" are entered into each record. Only someone with permission to access specific application functions (e.g., create, delete, print, etc.) is allowed to use them. The application administrator may assign an initial password for each user, but users may change their passwords at any time thereafter. Though the application administrator can never "read" a user's password (passwords always appear as asterisks), he or she may over-write or delete a user's password at any time, or delete the "user account" (record) entirely, thereby denying that individual access to the application.

When you log on to ID Card Maker for the first time, the User Name and Password fields in the Logon window are disabled, indicating that a "System Administrator" has not yet been created. To "secure" the application, that is, force the initial Logon window to require user names and passwords, at least one user account with "System administrator" privileges must be created (see below). If all "user accounts" with "System administrator" permission are deleted, the logon window will stop forcing the use of user names and passwords. This is a visible

reminder that at least one “user account” must be created which has over-all access to the database.



Create a User Account

The first time you click the EDIT USER ACCOUNTS button, an empty User Permissions window appears. CREATE, DELETE, SAVE, and UNDO buttons are located at the top.

CREATE

Creates a new “user account.” Each “user account” is denoted by a “record number” at the bottom left of the User permissions window.

DELETE

Deletes the current “user account.”

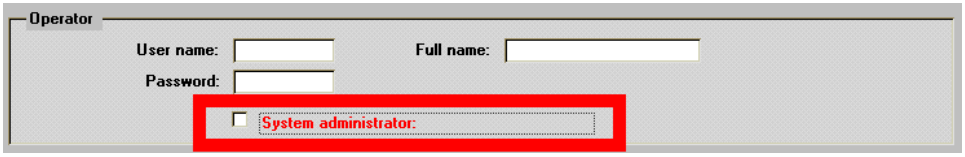
When a “user account” has been created or edited, the SAVE button saves the changes.

SAVE

This button undoes the actions taken since the last “save” in a “user account.”

UNDO

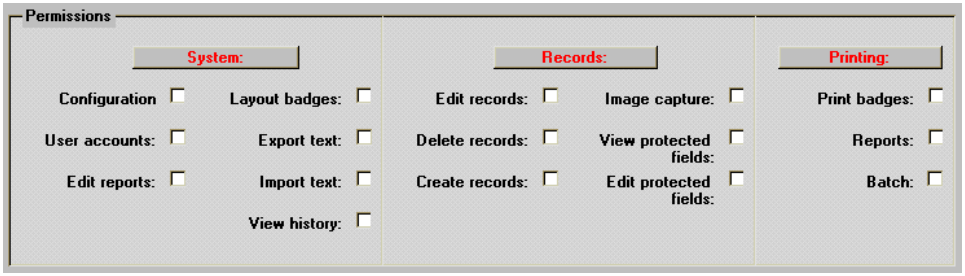
Click the CREATE button to create a record for yourself. An “Operator” box in this window contains text fields. Enter a “user name” up to 8 characters in the User Name field. This is the name you will enter when you logon to ID Card Maker. Enter a descriptive name for the user in the Full Name field (e.g., first and last names, or employee ID, etc.), up to 50 characters long. Enter a password, up to 15 characters, in the Password field. *Passwords may be alphanumeric and are case sensitive!*



There is a “System administrator” check box labeled in red. At least one person must have this option checked. It forces the use of User Names and Passwords at the initial Logon window. Until a System Administrator for ID Card Maker is assigned, *anyone* may launch ID Card Maker to create records and print badges. *Important! Only someone with System Administration permission is able to access the Database Management portion of ID Card Maker. Database Management is where the System Administrator may modify database fields, and create, copy or attach to Microsoft Access or ODBC databases. (See “Database Management” on page 59.)*

Below “Operator” is a “Permissions” box. This section contains check boxes to enable or disable access to application functions. A function is enabled for a user when its box is

checked. (Click the SYSTEM, RECORD, or PRINT buttons to enable or disable *all* the options below them.)



The individual permissions are:

Configuration	This permission allows you to use all the tools in the Configuration window (e.g., Program Preferences, Database management, ID Server Setup, etc.).
User accounts	This permission allows the user to create, edit and delete user accounts.
Edit reports	This permission allows users to create and edit the queries upon which reports are based.
Layout badges	This permission allows the user to open and use the IDLayout badge design utility.
Export text	This permission allows users to export data in the ID Card Maker database to an export text file.
Import text	This permission allows users to import data from another database into the ID Card Maker database.
View history	This permission allows users to view the Badge History, Record History and Program History if they were enabled.
Edit records	This permission allows users to edit data in the ID Card Maker database.
Delete records	This permission allows users to delete records and their images in the ID Card Maker database.
Create records	This permission allows users to create records in the ID Card Maker database.
Edit protected fields	If you marked specific database fields as “protected,” only someone with this permission may edit them. The fields are otherwise un-editable. (See “Edit Field Definitions Window” on page 64.)

View protected fields	If you marked specific database fields as "protected," only someone with this permission may view them. The fields are otherwise invisible. (See "Edit Field Definitions Window" on page 64.)
Image capture	This permission allows users to capture images.
Print badges	This permission allows users to print badges.
Reports	This permission allows users to print reports.
Batch	This permission allows users to perform "batch" operations (i.e. apply actions to groups of records).

At the bottom of the User Permissions window is a text field for creating a "Search Filter" using a standard SQL Where clause. (See "Searching with SQL" on page 152.) For each user, you may elect to apply a filter that restricts the records a user may browse. For example, if you want to restrict a user to viewing only records belonging to the Engineering Department, you would enter: Department = "Engineering." That user will only be able to view records where the word "Engineering" is entered in the Department field. Add additional fields as needed providing authorized users a range of records to browse. Alternately, select a query from a report using the SELECT FILTER FROM REPORT LIST pick list. The SQL from the selected report will act as the "filter" for the user account.

Create as many "user accounts" as you need. You may assign temporary passwords that the users may later change.

Users may change their passwords as soon as they logon to ID Card Maker. At the opening "home page," clicking the PASSWORD button opens a small window in which the user

enters their old, then a new, password. . (The PASSWORD button does not appear until at

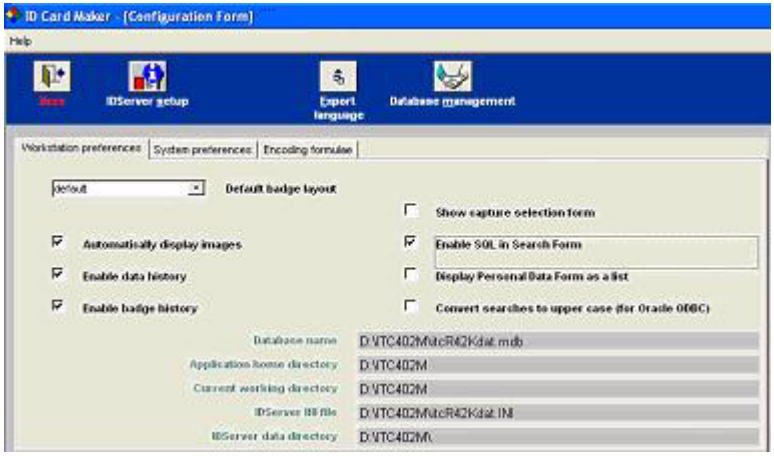
least one “System administrator” user account is created.)

Section 3.2

Configuring IDCM

You arrive at the Configuration window by clicking TOOLS ➲CONFIGURATION.

A number of application preferences are set in an area of the program known as Configuration.



Three buttons at the top of the Configuration window perform functions that require special user input.

IDSERVER SETUP	ID Server is the portion of ID Card Maker that is responsible for image capture and badge printing. This button takes you to a Setup window in which you set your preferences for "input" and "output" devices (e.g., cameras and printers), as well as other options. (See ID Server Setup).
DATABASE MANAGEMENT	ID Card Maker has a number of "management" functions: creating, copying and saving databases, attaching to alternate Microsoft Access or ODBC databases, "importing" database fields from another database, as well as adding, deleting and editing individual fields. Only someone with "System administrative" privileges may access Database Management. (See "Database Management" on page 59)

The main body of the Configuration window contains three tabbed properties sheets: WORKSTATION PREFERENCES (options applying just to the particular workstation), SYSTEM PREFERENCES (options applying to both a stand-alone system, and to all workstations in a networked environment), and ENCODING FORMULAS (text and data strings used for bar and magnetic encoding, as well as for other uses). (In a networked system, the System and Encoding formula preferences need only be set once.) Clicking on the "tab name" opens that property sheet.

Preferences

Workstation Preferences

Five non-editable text fields display useful information about the ID Card Maker application:

Database name	This field shows the name and "path" of the database file to which you are currently "attached." That is, this is the file that contains the actual data in your database.
Application home directory	This field shows where the ID Card Maker application is installed.
Current working directory	This field shows where the IDServer components are installed.

IDServer INI file	This field shows the name and "path" of the file that stores IDServer settings. (IDServer is the portion of ID Card Maker which manages image capture, image retrieval and badge printing.)
IDServer data path	This field shows the "path" where IDServer will save and retrieve badge layout and image files used in a badge design.

Five preferences may be set to offer workstation-specific features and functionality. These options must be configured at each workstation running ID Card Maker.

Default badge layout

The Default badge layout preference allows you to simplify data entry by establishing a default badge type whenever a record is created. Select from the pick list the badge you

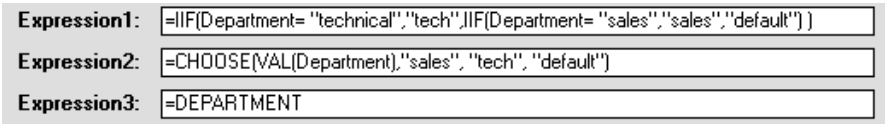
wish to use as the default. The list displays any ".bdg" (badge layout) files found in the folder you specified in the "Server data path." (See IDServer Setup) When you create your own badge layouts, ensure that they are saved to the folder you specified in the "Server data path" field. (Until you create your own badge layouts, only the "default" badge will appear in this list. After you have created your badge layouts, you may wish to return to this Configuration window to specify a new default badge.)

In addition to listing all your existing badges, there are the following items in the Default badge layout pick list: [Expression1], [Expression2], and [Expression3]. Selecting any of

these items allows you to use the "expression" in that field to determine which badge is assigned to the individual. (The Expression fields appear on the Encoding formula property sheet in this Configuration window.)

While the Configuration window doesn't offer the ability to automatically insert "functions" the way you can in IDLayout's Expression Builder (See "Expression Builder" on page 114), you may manually enter functions, operators and text. Note that all expressions must begin with an equal sign (=).

You may use any function and operator that is supported by Microsoft Access 2000. However, Polaroid Commercial ID Systems only supports and warrants the following expressions:



Expression1:

This expression uses "nested if" statements. An "if" statement follows this syntax: iif (argument, result1, result2). In plain English, that means: "If such and such a condition is true, then make a certain result apply. Otherwise, if the condition is not true, apply a different result."

The "argument" typically compares whatever is entered in a specified database field to a "value" (text, date or number) which you provide here. The syntax of the argument typically is: [database field]-[Boolean operator]-["literal text"]. (Note: literal text must be enclosed within quotation marks.) In the example in the graphic above, Department="technical" is the argument. That is, our program will look at every database record and see if the Department field contains the word "technical." If "technical" does, indeed, appear in this field, then this expression will make the word "tech" appear in the Badge layout pick list in the Personal Data window. (This example assumes that 1) you have a badge designed specifically for individuals belonging to the Technical department, and 2) that badge is, in fact, named "tech.")

If you only have two badge designs, "tech" and "default," this expression would be easily written. "Tech" would be result1 and "default" (or the name of your other badge design) would be result2. The expression would be entered as follows:

=iif (Department="technical", "tech", "default")

However, if you have numerous badges associated with specific database fields, then you would use nested iif statements. The example in the graphic above inserts a second iif statement in place of result2. This second iif statement may contain yet a third iif statement in the location of *its* result2, and so on. The only difficulty in using nested iif statements is keeping track of the parentheses...each iif statement must have an opening and closing parenthesis. In the example in the graphic above, you can see there are only two iif statements. While the expression begins with just one opening parenthesis, it ends with two closing parentheses.

Expression2:

This expression uses the Microsoft Access "Choose" function. The Choose function will look for a number—1, 2, 3 and so on—in the specified database field, and enter the word you supply in quotes according to which order it appears in the expression. For example, in the graphic above, three words follow the database field "Department": "technical", "tech", and "default." "Technical" is the first word, "tech" is the second, and "default" is the third. If a record contains the number 2 in the Department field, then the word "tech" will be entered in the Badge layout pick list of the Personal Data window. If a record contains the number 3 in the Department field, then the word "default" would be displayed in the Badge layout pick list.

This approach simply associates a specific number with a specific badge design. Use any field you wish to enter individuals' badge design number.

Expression3:

This last example is perhaps the easiest to use. If you have badge designs specifically associated with individual Departments, then use the =Department (or other database field) expression. This expression assumes two things: 1) you have a different badge design associated with each Department, and 2) the badge designs have the identical name as the actual Department (e.g., the Accounting department is issued a badge named "Accounting.bdg" and the Engineering department is issued a badge named "Engineering.bdg"). Therefore, this expression will automatically insert into the Badge layout pick list the word entered in their Department field. Since that word is the appropriate badge name, the correct badge will be issued to him or her.

Automatically display images

The automatic image display preference allows you to have captured images automatically display when opening a database record. If this option is not enabled, the image is

not displayed until you click DISPLAY in the Personal Data window. The default setting is disabled. This option may be toggled on or off as often as you wish.

Enable data history

This preference "turns on" a history of "application events" as well as changes made to specific records. When ENABLE DATA HISTORY is "on," a HISTORY button is displayed in the

Tools window. Clicking HISTORY presents a log of events at both the application and record level. At the application level, it records when users log on and off the system, which ones accessed specific portions of the application and from which workstation, and more. At the record level, it records every event occurring in a record: image capture, badge printing, database field edits, and more. ID Card Maker does not begin creating a "history" until this option is checked.

Enable badge history

This preference "turns on" a history of badge issues. When enabled, a HISTORY button appears in the Personal Data window. When clicked, it displays a "snapshot" of the data-

base as it was each time a badge was printed. It allows you to "look back in time" at the data recorded in the various database fields at the time each badge was issued.

Enable Capture Selection Form

This preference turns on a pop up form when you want to capture a new graphic in a record. During IDServer setup you decide how many portrait, fingerprints, and signatures

to capture, this form will allow to select all or one of the choices to save going through ALL screens to capture.

Enable SQL in Search Form

Selecting this option inserts two new search fields in the "home page" of ID Card Maker: "SQL WHERE clause" and "SQL ORDER BY clause."

The "SQL WHERE clause" field allows you to create very customized searches of your database using common "SQL" (Structured Query Language) commands. The "SQL ORDER BY clause" allows you to custom-sort the results of a query. (See "Sorting with SQL SORT BY" on page 153)

Display Personal Data Form as a list

Selecting this option changes your first "view" of database information from an ID Card Maker Personal Data form to a more conventional "table" displaying records in columns and rows. The view may be toggled between "form" and "table."

Convert searches to upper case (for Oracle ODBC)

This option will automatically convert text you enter in a search field to upper case. While searches in a Microsoft Access database are case-insensitive, Oracle and some other ODBC databases require text to be in all uppercase letters.

System preferences

Click the System preference tab to view and set these options. System preferences are "global." (In a stand-alone system, these settings control ID Card Maker on the local workstation; in a networked environment, these settings apply to every workstation running ID Card Maker and only have to be set once.)

Document Name for Print Manager

The Document name for Print Manager preference allows you to associate a dynamic database field with a print job. That is, whenever you send a badge to the printer, that print

job's "name" will appear in the Print Manager window with the contents of the field you enter here. For example, if you enter "LastName" (one of ID Card Maker's fields) in this preference field and send John Baker's card to the printer, Windows' Print Manager will report that "Baker" is queued for printing.

Alternate field for ImageID

ID Card Maker automatically "names" each image with a serial number when it is captured and saved (e.g., 255.jpg), and inserts the "number-name" in the database field "ImageID." There may be times when you will want to name the captured image with the

contents of another database field, such as a person's Social Security number. In such a scenario, if a database record contains a Social Security number, that number will become the "name" of the portrait image file (e.g., 261-21-8273.jpg) when it is captured and saved, and that number will be inserted in ID Card Maker's ImageID field. Once ID Card Maker names a captured image, it uses that "name" in the ImageID field until the record is deleted from the database. There are some inherent dangers in using an alternate field:

- The alternate field must be set to "Unique Index" in the Edit Field Definitions window. (See "Edit Field Definitions Window" on page 64.) If a field, such as "LastName," is not set to Unique Index, ID Card Maker will not know which "Baker.jpg" to display if there is more than one Baker in the database.
- Use of any field that does not consist of sequential numbers GREATLY reduces the functionality of ID Card Maker's "Directory Tree" structure. The "Directory Tree" is hardly noticed, but enhances the speed of image retrieval and display. ID Card Maker automatically creates subdirectories within the Portrait, Fingerprint, and Signature directories for every 1,000 images captured. The program was developed in such a way that, through the use of serial numbers and these subdirectories, images can be "found" extremely quickly—virtually instantly. If image names are not serial numbers, it may take a long time for ID Card Maker to "find" an image and display it on screen or print on a badge.

Note: The database must be empty before this option can be enabled.

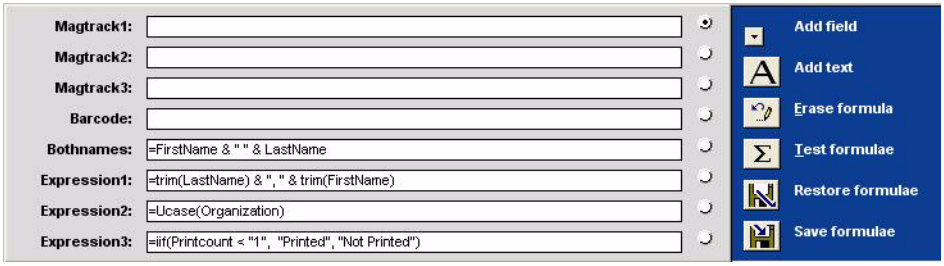
Require images to print

The REQUIRE IMAGES TO PRINT preference allows you to choose between making portraits optional or required when printing badges. If you leave this check box empty, cards may be printed even though an individual's picture has not been taken. If you place a check in this box, ID Card Maker will not print an individual's badge until his or her picture has been taken.

Below the System preferences are some additional non-editable fields. These are for information only. Depending on whether or not you are attached to an ODBC data source, and other additional database configurations, these fields will display useful information.

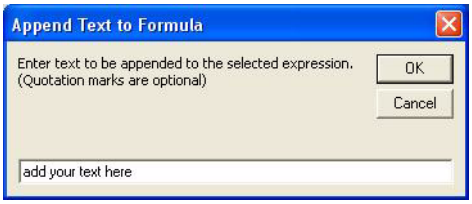
Encoding Formulas

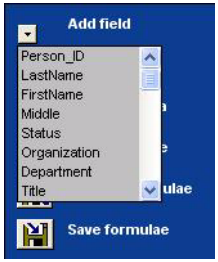
Click the Encoding formula tab to view and edit these options. There are eight text fields for entering a variety of "encoding formulas" or "expressions" which dynamically combine data from database fields and/or literal text strings.



Mag Track 1, 2, and 3: In the Magnetic Encoding dialog of ID Setup (see "Encoding" on page 56), you will enter prefixes and suffixes for the magnetic encoding fields instructing your printer when to start and stop encoding data. The Mag track fields *here* are where you tell ID Card Maker *what* to encode. You must know what data your access control software is looking for. (Note: if your data string is very long, it may not all appear in the mag track field window. Use the left and right arrow keys on your keyboard to "scroll" through the data string.) If you enter expressions containing "syntax" errors, Microsoft Access may not allow you to "leave the field" until the error is corrected. If you do not know how to correct the error, simply delete the contents of the field and try starting over.

Create the encoding formulas and expressions using the ADD FIELD and ADD TEXT buttons:





click in an encoding field or on its corresponding radio button to select it. Then click the ADD FIELD down arrow to display a list of all the database fields. Click the field you want to include in the formula. That field is inserted into the encoding formula. An ampersand (which links multiple values) is automatically supplied, allowing for placement of the next value. Add as many fields as your access control system requires. (You do not have to delete the last ampersand in the expression.) To insert static or "literal" text in the expression, click ADD TEXT. A small window appears allowing you to type the exact text required by your access control system. You do not need to enclose text in quotation marks in this window; ID Card Maker supplies them automatically. (However, if you are inserting only blank spaces with no additional characters, the space characters must be enclosed within quotation marks.) Enter the fields and literal text in the order your access control system requires them. Each time you use ADD FIELD and ADD TEXT, the new values are inserted at the end of the data string. If you accidentally insert the values in the incorrect order, use cut and paste to rearrange the data string.

To manually create the encoding formulas: click in the encoding field or on its corresponding radio button to select it. Begin the expression with an equal sign (=). Type in field names or literal text in the required card reader order. Enclose literal text (that is, static text appearing on every card's mag track) within quotation marks (" "); if the contents of specific fields are required, type the field names exactly as they appear in the database; use ampersands (&) between fields and literal text to link multiple values. In addition, you may use TRIM, LEFT, RIGHT and other Microsoft Access formatting features to select portions of a database field (such as the first three letters of a last name, or the year of a date of birth). (See "Field Formatting" on page 190.)

Repeat these steps for each of the mag track fields your access control system require.

Bar Code: Follow the procedures above to encode data in the bar code field. Note, however, that like magnetic encoding, bar codes also require "prefixes" and "suffixes." Bar code prefixes and suffixes are specified within IDLayout ("Bar Encoding" on page 121).

If your bar code font does not appear in the Encoding list in the Properties of Bar Code dialog of IDLayout, you must manually add the prefix and suffix characters to the Bar Code expression here. Insert the encoding characters as literal text (enclosed within quotation marks) at the beginning and end of your Bar Code expression.

Both Names: ID Card Maker offers a database field called "BothNames" which links an individual's first, middle and last names. You may customize how the BothNames field displays people's names.

If you want:	You must type:	Explanation
Robert Smith	FirstName & " " & LastName	The quotation marks contain literal text—in this case, a space to separate the two names.
R. Smith	Left [FirstName, 1] & ". " & LastName	Left [fieldname, 1] is a formatting command that instructs ID Card Maker to extract the first letter of the database field "FirstName." The quotation marks enclose a period and space after the first letter of the first name.
Smith, Robert	LastName & ", " & FirstName	Enter the fields in the order you wish them to appear. The comma and space enclosed in quotes separate the two names.

If you want:	You must type:	Explanation
If you want to use a nickname, if present, instead of a first name, use a conditional "if" statement like the following:		
Bobby Smith or Robert Smith	= iif (NickName = NOT NULL, NickName & " " & LastName, FirstName & " " LastName)	The "iif" statement presents an "argument." If the argument is true, "result1" will occur; if the argument is false, "result2" will occur. The syntax is as follows: iif (argument, result1, result2) The expression in this example is interpreted in plain English as follows: If the NickName field is not empty (i.e., contains data), then add the contents of NickName, plus a space, plus the contents of LastName; otherwise, use the contents of FirstName, plus a space, plus the contents of LastName. (Of course, you must have a "NickName" field in the database for this expression to work.)

Expression 1, 2 and 3: ID Card Maker provides three additional fields called Expression 1, 2 and 3 which you may use in your badge layouts or as the basis for selecting a default badge type each time a record is created. You may create expressions in the same manner as mag track and bar code encoding fields. Use ADD FIELD and ADD TEXT or type the data strings to create custom strings of information.

When you finish entering all your formulas and expressions, click TEST FORMULAS. ID Card Maker verifies the syntax and integrity of each of the formulas, presents a window confirming the results, and displays a sample of each formula (extracted from the first record in the database).

In addition, you may save your formulas to a text file by clicking the SAVE FORMULA button. A standard Windows Save dialog opens allowing you to name and save the formulas. To use formulas that you previously saved, click RESTORE FORMULAS. A standard Windows Open dialog allows you to navigate to the encoding formulas file you previously saved. *Note: If you change the names of database fields in the Edit Field Definitions window and rebuild the User Field table(See "Modifying Tables and Forms" on page 61,) your formulas here may no longer "match" the field names in the database. Always verify*

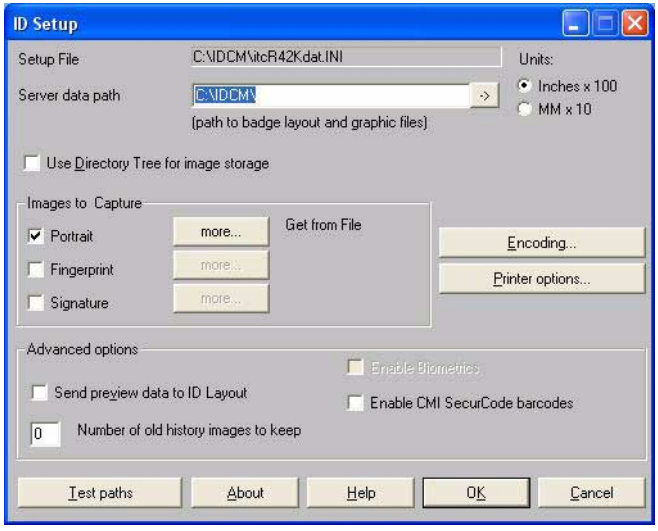
that the field names used here in the Encoding Formulas of Configuration match the actual field names used in the database.

Section 3.3

IDServer Setup

You arrive at ID Setup by clicking TOOLS➲CONFIGURATION➲IDSERVER SETUP.

ID Server is a utility that configures your image capture and printer settings. You may not capture or view images until you have run the ID Server setup program. When you click IDSERVER SETUP an ID Setup window appears.



1) The path and name of the SETUP FILE is identified at the top: C:\IDCM\dat.INI. (The path may differ if you did not accept the default installation directory.) Any changes you make here in ID Setup will be written to this file. The ini file name follows the "dat" MDB file name SO if the file is in the \IDCM\ directory and is named IDCMDAT.MDB it will be in " C:\IDCM\IDCMDAT.ini ".

2) The ID Server DATA PATH is where ID Card Maker stores and retrieves images, badge and sheet layout files, and "field definition" files. (See "Database Management" on page 59.) However, you must tell ID Card Maker where on your disk or network you want these images and badge files to be stored. Ordinarily, the **Server data path** defaults to the directory where ID Card Maker was installed. ID Card Maker will automatically create separate Portrait, Fingerprint and Signature directories to store your portrait, fingerprint and signature images inside this directory, though you may elect to store them elsewhere on your hard disk or network. (See "Graphics Definition dialog" on page 45) If you specify a different directory as your **Server data path**, you must enter that path on each computer in the network running ID Card Maker.

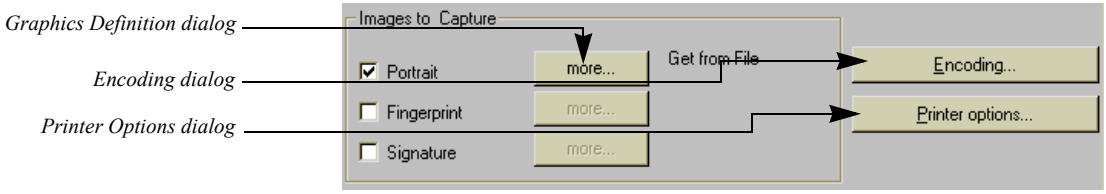
3) The UNITS: (Inches vs. Millimeters) radio buttons allow you to specify whether measurements related to captured images and badge size default to metric or English standard.

4) The USE DIRECTORY TREE for image storage check box allows you to improve the speed and performance of image retrieval. Many operating systems handle file systems (storage and retrieval) inefficiently; they begin to experience sluggishness if they have to search for a specific file (in this case, the individual's portrait, fingerprint or signature) within a directory or subdirectory containing more than 2,000 files. Checking this box instructs ID Card Maker to automatically create additional subdirectories as needed for every 1000 image files that are created. (These subdirectories will be located inside the Portrait, Fingerprint, and Signature folders, which are created automatically when you mark the check box to capture their images.) In this way ID Card Maker will be able to search more quickly for and retrieve images.

5) If you use CMI's SecurCode bar code reader and bar code fonts, turn them "on" by checking the ENABLE CMI SECURCODE BAR CODES check box. SecurCode bar code fonts offer increased security by appending to the database's bar code field an additional set of SecurCode characters encoded and read by the card reader using this system. Enter the additional characters (text or numbers) to be appended to the bar code field in the "Customer Code" field which appears immediately to the right when the box is checked. That "string" will now be added to the contents of the bar code field, and will display in the SecurCode font.

6) The SEND PREVIEW DATA TO IDLAYOUT option allows you to view actual data from the database (i.e., images and text) when you place text and image objects on a badge layout as you design badges. When you check this option, an alert window informs you that the data (text and images) *from the next record whose badge you preview in the Personal Data window* will be used for display purposes in the badge design program. ID Card Maker will "read" the data in that record and write it to a text file ("Lpreview.txt") in the ID Server data path; when you select the "Preview" option in IDLayout, the application will "read" Lpreview.txt and use its information to "fill in" the badge objects. To later change the "sample" record, return to ID Setup and place a new "check" in this option. You will be prompted again that the *next* record you preview will be used in IDLayout. Use caution when selecting a record for badge preview; that record is "unsecured" in that anyone with permission to edit badge designs may view the contents of any database field placed, even temporarily, on the badge. *Note: This feature allows you to keep up to 9 images. The 10th image will overwrite the older files*.

In addition to the settings and options that are configured directly within the ID Server Setup window, there are four additional "dialogs" or windows from which you may configure various hardware and software features:

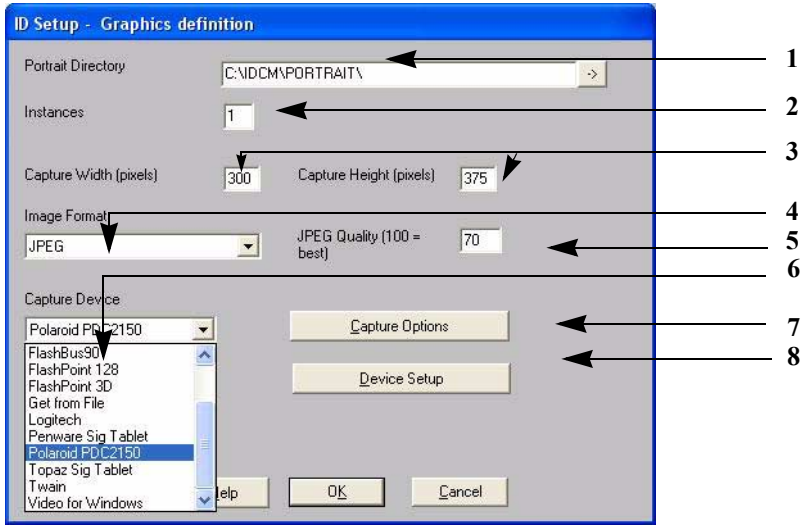


Graphics Definition dialog	The Graphics Definition dialog is used to select: • which method you wish to use for either portrait, signature or fingerprint capture • image size • graphic file format • hardware options • software options • the number of images you wish to capture
Printer Options dialog	The Printer Options dialog is used to select: • PVC card and sheet/paper printers • print offset values • print queue options • enable Sheet printing
Encoding dialog	The Encoding dialog is used to select the "start" and "stop" commands which instruct the magnetic encoder on your card printer when to start and stop encoding data, and to select a Smart Chip protocol for Smart Card encoding.
Sheet Layout dialog	While not a "hardware setup" dialog, the Sheet Layout dialog is used to design the number and positions of multiple badges on a single sheet of material. You access the Sheet Layout dialog from *within* the Printer Options dialog. If you check the "Use Batch printing option" check box and the "Use Sheet formatting option," a new SHEET LAYOUT button appears.

Capture Devices

Graphics Definition dialog

Open the Graphics Definition dialog by clicking a check box for the image-type you wish to capture (e.g., Portrait, Signature, or Fingerprint), then clicking the MORE button beside it.



The Graphics Definition dialog offers the following options:

1) PORTRAIT / SIGNATURE / FINGERPRINT DIRECTORY This path points to your image files. If you entered a new path in the SERVER DATA PATH field in the opening ID Server Setup window and allowed ID Card Maker to automatically write the paths to your images files, that path was automatically entered here. Otherwise, enter an alternate path to your Portrait, Signature and Fingerprint image directories.

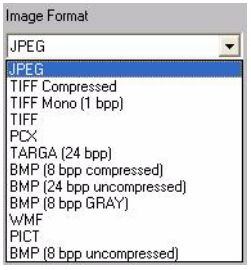
2) INSTANCES The "Instances" field allows you to capture multiple images for each image type (Portrait, Signature or Fingerprint). Enter the number you wish to capture (from 1-10). If, for example, you enter "3" in the Graphics Definition dialog for Portraits, you will be prompted to take three portraits before you are prompted to capture signatures and/or fingerprints. (For example, you may take a picture of a student, his

Level I
Level II

or her parent or guardian, and homeroom teacher. Any or all of the images may be used on badges and rosters.)

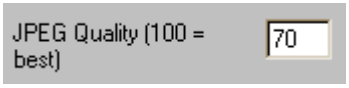
3) CAPTURE WIDTH AND CAPTURE HEIGHT Enter width and height parameters in these fields. We recommend a width of 300 and height of 375 for portraits (yielding a one inch by 1 1/4 inch image), width of 400 and height of 400 for fingerprints (yielding almost a 1 1/2 inch square image), and width of 900 and height of 300 for signatures.

4) IMAGE FORMAT You may select from the pick list the file format in which the image will be saved. We recommend that you save portraits as "JPEG," fingerprints as



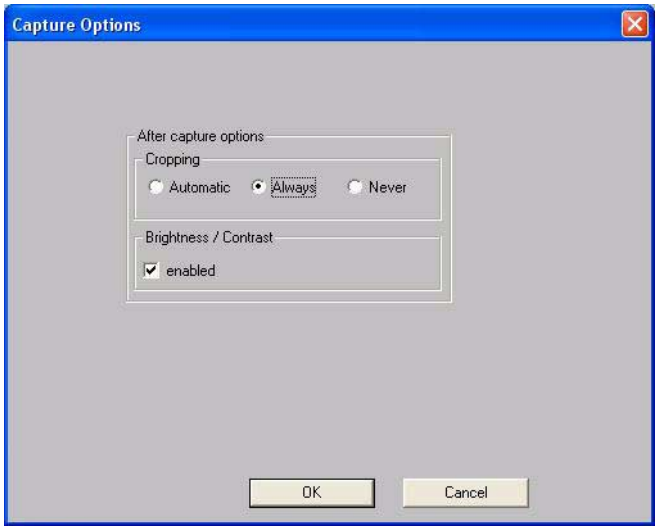
"BMP(8bpp GRAY)," and signatures as "TIFF mono." (See "Graphic File Formats" on page 175 at the end of this manual for a table describing the characteristics of the graphic file formats ID Card Maker supports.)

5) IMAGE QUALITY This option, only appearing if you selected JPEG as the file format, sets the balance between the image's compression and image quality. (A lower number offers greater image compression at the expense of image quality. A higher number offers greater image quality, but a larger file.) We recommend that you accept the default value of 70 which produces image files in the range of 10k-12k for 300 x 375 pixel images.



6) CAPTURE DEVICE The CAPTURE DEVICE list allows you to select the device you are using to capture the image.

7) CAPTURE OPTIONS The CAPTURE OPTIONS button in each of the Graphic Definitions dialogs offers options for cropping and enabling adjustment of image brightness and contrast.



a. Cropping:

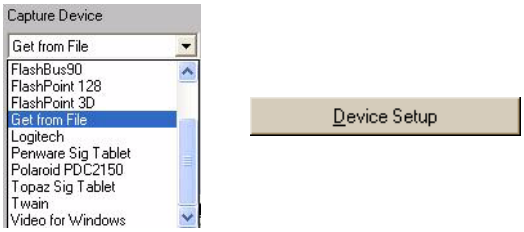
i) AUTOMATIC If you capture an image at the same pixel size you established in the Capture Width and Capture Height fields above, the image will automatically be "cropped"—the entire image will be brought into ID Card Maker at that size. If the image is larger or smaller than specified in the width and height fields above, a cropping window will allow you to select a portion of the image.

ii)ALWAYS A cropping window will always appear allowing you to select a specific portion of the image to be used. The portion you crop is saved to the pixel width and height you set above.

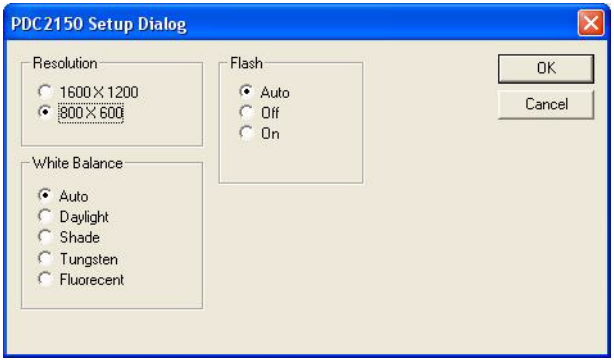
iii)NEVER A cropping window will never be presented. The entire image will be saved.

b. Brightness/Contrast: If enabled, the cropping window will also contain slide bars for adjusting the image's brightness and contrast. Dragging the slide bars left or right changes the brightness and contrast in "real time." Clicking on the brightness or contrast buttons to the left of these slide bars will revert the image to its original capture attributes.

7) CAPTURE DEVICE AND DEVICE SETUP There are eight methods for capturing images: *Polaroid PDC 2150 Camera*, *Video for Windows*, *TWAIN*, *Topaz Sig Tablet*, *Penware Sig Tablet* or *Capture from File*. For each image you intend to capture (portrait, fingerprint and signature), select your capture method from the Capture Device pick list. The input device you use (video camera, scanner, signature tablet, etc.) will have required you to install one of the driver-types listed here; the Get from File option allows you to import images previously captured and saved to disk. Each capture method offers its own Device Setup options when you click the DEVICE SETUP button.

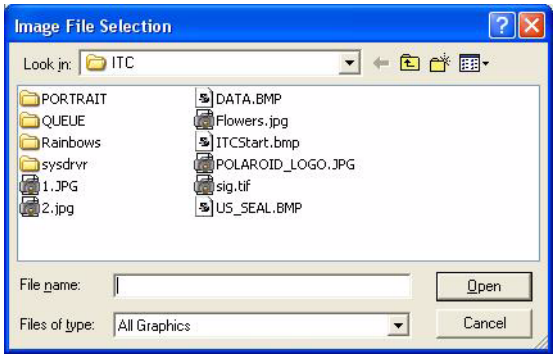


The PDC2150 Setup Dialog allows you to enable or disable the Flash, and to set options for the image Resolution and White Balance.

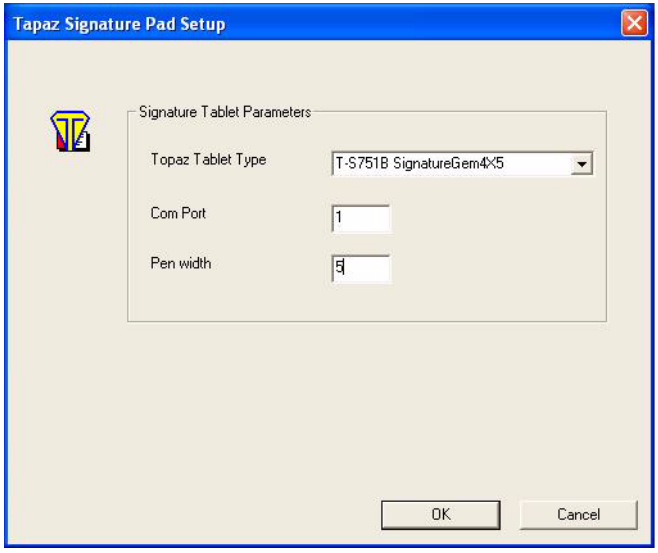


a.CAPTURE FROM FILE When clicking ID Card Maker's CAPTURE button to take a pic-

ture, a standard Windows “open dialog” box appears in which you navigate to the image you wish to use in the database. No device setup options are available.



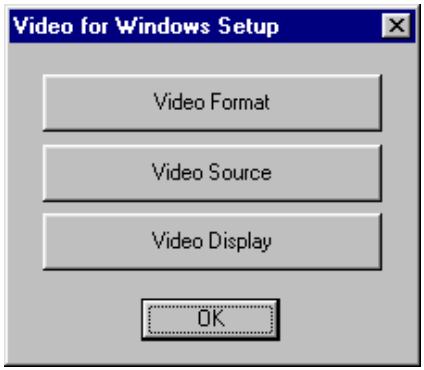
b. TOPAZ SIG TABLET The DEVICE SETUP button for this type of capture brings up a small window allowing you to specify the type of tablet you have, the Com Port the tablet is attached to, and set the thickness of the “pen.” A smaller number yields a thinner “line,” while a larger number yields a slightly thicker signature (like the difference between a fine point and felt-tip pen). “10-15” is a medium thickness; select a number between 1-25. Enter the Com Port number to which the SigGem signature tablet is physically connected. (The PenWare Sig Tablet’s pen “thickness” setting is 1-5, with “3” being an average thickness.)



c. TWAIN When you select TWAIN as the capture method, the Device Setup options presents you with a list of all TWAIN drivers installed on your computer. At the top of the list is the option Always Ask. If you select Always Ask, a selection window showing all available TWAIN drivers will appear every time you begin capturing an image. Otherwise, select the TWAIN driver for your camera or scanner from the list; this driver will always be used. Capture options, such as color, hue and saturation, are configured directly from your TWAIN hardware drivers at the time of capture instead of from ID Setup. The options differ from device to device.

d. VIDEO FOR WINDOWS The DEVICE SETUP button brings up a window displaying VIDEO DISPLAY, VIDEO SOURCE and VIDEO FORMAT buttons. The options available to you through these buttons are hardware dependent—each device driver will present its own windows and feature options. When setting the Video Display options, however, select “Full,” “Full Screen,” or “640 x 480” (this window may offer choices like 1/4, 1/2, or Full, referring to how large the image will be

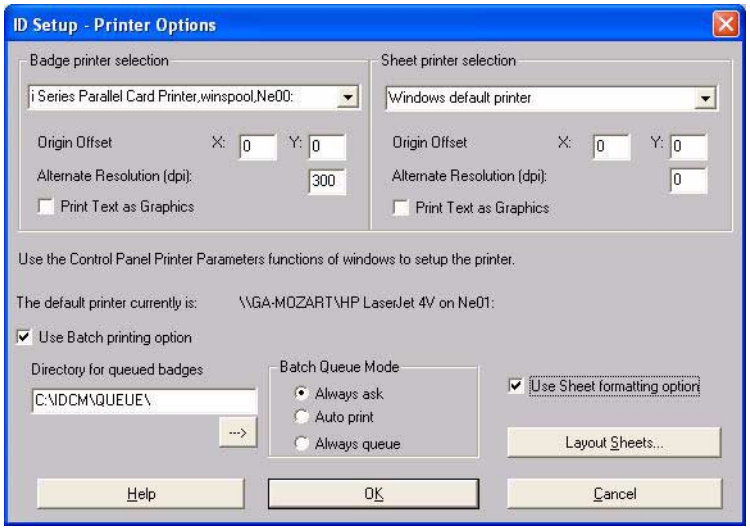
displayed on screen). This ensures the highest image quality when the image is brought into ID Card Maker.



Click OK in each Graphics Definition dialog when you are done.

Printers

Clicking the PRINTER OPTIONS button brings up the Printer Options dialog for specifying your printer settings. (Your printers' "printer drivers" must already be installed for them to be available in this dialog.)



Printer Options Dialog - Level II and Level III

Note: for instructions on printing options for IDCM Level I version, refer to "Printer Options Dialog - Level I" on page 54.

1) There are two boxes at the top of the dialog: "Badge Printer selection" and "Sheet Printer selection." One is for selecting your card printer; the other is for selecting a printer for paper or sheet output. Click the down arrow in each box to select your card and sheet printer from the list of installed printers. *Note: ID Card Maker will always default to the Badge printer unless the badge's width or height is greater than four inches, or the USE SHEET FORMATTING OPTION has been selected.*

2) In both the Badge and Sheet printer selection areas of the Printer Options dialog are fields for entering X and Y values for "Origin offset." This allows you to adjust how closely to the edges of the card or page your printer will print. The offset values are set to the upper left-hand corner of the card or page, and are measured in hundredths of an inch/millimeter. Leave these values set to "0" for now; you may adjust them

later if your printed output is not satisfactory. To make the badge print more to the right, set the X Offset to a positive number (e.g., 5, 10, 15); to make the badge print lower on the card or page, set the Y Offset to a positive number. (Use negative numbers—such as -5—to make the badge print higher or more to the left.) Additionally, the "Alternate Resolution" fields in this portion of the window allow you to manually adjust the speed and memory requirements of the print process. A "0" in this field instructs ID Card Maker to use the printer's default resolution when rendering images. If your printer is able to print at extremely high resolution (1200 dpi, for instance), setting the "Alternate Resolution" to 300 or less will improve print speed and performance. Any value other than "0" overrides the printer's default value.

3) Several more options are available at the bottom of the Printer Options dialog.

a. Checking the USE BATCH PRINTING OPTION enables batch printing and makes three new radio buttons immediately appear in the Printer Options window under the heading BATCH QUEUE MODE. These radio buttons refer to queuing options:

i) the ALWAYS ASK option will present a user-input prompt each time you click a PRINT button asking if you want to print a badge now or queue it for later;

ii)the AUTO PRINT option is used primarily when printing exclusively to a paper printer. If USE SHEET FORMATTING is selected (see "b." below), cards automatically bypass the selected PVC card printer and are sent to the sheet printer; printing does not begin, however, until enough cards have been queued to fill a sheet. If USE SHEET FORMATTING is not selected, the badge will be printed on the PVC card printer immediately.

iii)the ALWAYS QUEUE option will queue all badge print requests until you decide to print the contents of the queue.

If you do not select USE BATCH PRINTING, an individual's badge will be printed immediately after you click a PRINT button. If you check USE BATCH PRINTING, ID Card Maker will create a subdirectory named "C:\IDCM\Queue" on the local workstation. If you wish to change the directory for where the queue will be stored, use the BROWSE button

to enter an alternate path in the DIRECTORY field at the bottom of this window. You may change these options at any time by returning to this window.

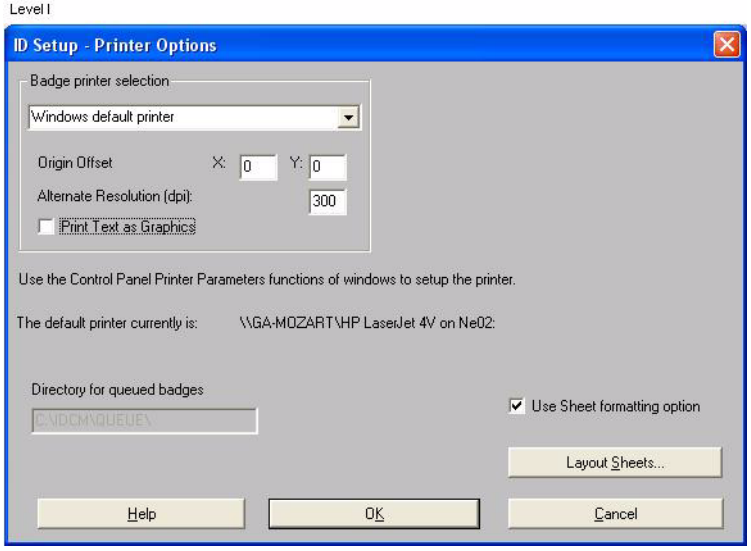
b. Check USE SHEET FORMATTING when you want to bypass the card printer and print your badges on preprinted badge forms or create and print rosters. With this

option checked, ID Card Maker sends the badge print request directly to the sheet printer you selected in Sheet Printer Selection (see above). This option may be checked and unchecked as often as your needs require. When you check this option, a new LAYOUT SHEET button appears. The LAYOUT SHEET button disappears when you deselect this option. (See "Layout Sheet dialog" on page 56) *Note that if you try to print a badge whose height or width is greater than four inches, ID Card Maker will automatically bypass your card printer and send the badge print request directly to the paper printer you selected in the Printer Options dialog.*

Printer Options Dialog - Level I

The following instructions are for the Printer Options dialog in IDCM Level I version.

1) At the top of the dialog, click the down arrow in the"Badge Printer selection" box to select your card printer.



2) Enter the X and Y values for "Origin offset." This allows you to adjust how closely to the edges of the card or page your printer will print. The offset values are set to the upper left-hand corner of the card or page, and are measured in hundredths of an inch/ millimeter. Leave these values set to "0" for now; you may adjust them later if your printed output is not satisfactory. To make the badge print more to the right, set the X Offset to a positive number (e.g., 5, 10, 15); to make the badge print lower on the card

or page, set the Y Offset to a positive number. (Use negative numbers—such as -5—to make the badge print higher or more to the left.) Additionally, the "Alternate Resolution" field in this portion of the window allow you to manually adjust the speed and memory requirements of the print process. A "0" in this field instructs ID Card Maker to use the printer's default resolution when rendering images. If your printer is able to print at extremely high resolution (1200 dpi, for instance), setting the "Alternate Resolution" to 300 or less will improve print speed and performance. Any value other than "0" overrides the printer's default value.

3) If you do not select USE BATCH PRINTING, an individual's badge will be printed immediately after you click a PRINT button. If you check USE BATCH PRINTING, ID Card Maker will create a subdirectory named "C:\IDCM\Queue" on the local workstation. If you wish to change the directory for where the queue will be stored, use the BROWSE button to enter an alternate path in the DIRECTORY field at the bottom of this window. You may change these options at any time by returning to this window.

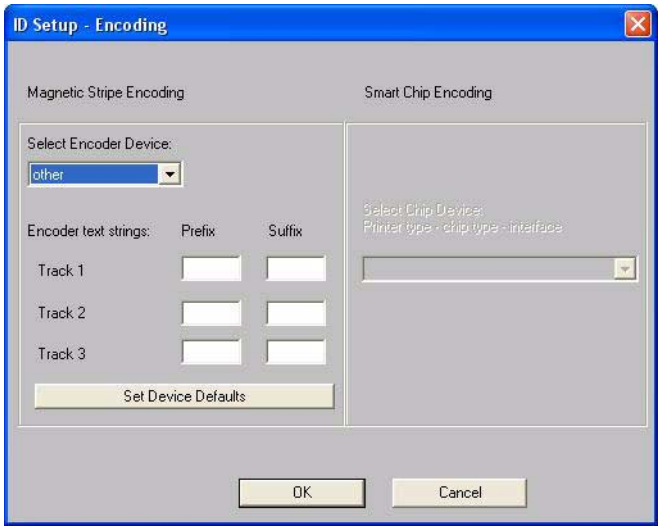
It is important to verify printer driver settings in Windows' Printers folder. The printer driver is a software utility provided by your printer manufacturer that allows it to operate in the Windows environment, but also allows you to set various options and preferences for how the printer functions (e.g., selecting either 300 dpi or 600 dpi output resolution).

Go to Start➲Settings➲Printers. The Printers folder opens, displaying all the printers whose drivers have been installed on your computer. Right-click on your PVC card printer in this window and select Properties from the context menu to open the Properties sheet. There is no single standard for how the printers' properties are presented to you. The Properties sheet may be "tabbed" offering easy access to configuration options; however it may be slightly different on older printer drivers, you may have to look for a reference to SETUP.

Note that the printer settings are where you will specify how many color panels your printer ribbon contains, and whether or not you using an overlay panel or protective laminate. Some printer drivers allow you to adjust temperature settings of the card printer's print head and lamination station. You should familiarize yourself with this property sheet. Because PVC card printers are so mechanical, they are the most likely source of problems in producing high quality photo ID badges. The printer driver is the first place to turn when trying to troubleshoot printing problems.

Encoding

When you click the ENCODING button, the Encoding dialog appears. If your card printer supports writing to a magnetic strip, you must specify "start" and "stop" characters instructing the printer when to start and stop magnetically encoding data. ID Card Maker has pre-configured the prefixes ("start") and suffixes ("stop") for common card printers. Select your printer from the pick list; the correct prefix and suffix is supplied. If your printer requires characters other than those supplied by ID Card Maker, enter the correct prefixes or suffixes for any of the three magnetic "tracks" your card reader uses. (Refer to your card printer's documentation to determine whether other prefixes or suffixes are required.).



Layout Sheet dialog

The LAYOUT SHEET button is only available if you selected USE SHEET FORMATTING in the Printer Options dialog. The purpose of the LAYOUT SHEET option is to allow you to print more than one card on a pre-printed badge form or to create rosters. The left side of the Sheet Layout window shows a graphical representation of the sheet layout; the right side of the window contains fields for changing the layout.

Note: Sheet Layout uses considerably more computer resources than printing a single badge on a PVC card printer. For example, a single badge containing a number of graphic images might result in a 1.5M print file. If a sheet layout contains 8 badges, the

size of the print file jumps to 12M! Therefore, sheet printing is sent in bands so that you do not experience any memory problems.

1. The INCHES and MM radio buttons allow you to select which unit of measurement to use when defining your badges on the sheet layout.
2. The WIDTH and HEIGHT values are derived from the printer driver of the printer selected in the Printer options dialog of ID Server Setup, and refer to the total printable area of the sheet printer.
3. Identifies the name of the sheet printer.
4. The USE BACKGROUND LAYOUT check box allows you to add graphics and text in the Header and Footer area of the sheet layout. The first time you check this box, a Save As...dialog opens prompting you to provide a name for the Sheet Background Layout file you are about to create. Then IDLayout launches, displaying the sheet layout currently configured in the Sheet Layout dialog. Thereafter, use the EDIT or LOAD buttons to launch IDLayout and open the current or alternate background layout. (See "Badge Design" on page 97) Within IDLayout, you may insert Text or Images anywhere on the "background" of the sheet. (The gray rectangles on the sheet represent the "badge" you selected for inclusion on the sheet layout.) Click the SAVE button to save your changes. To create a new Sheet background layout, open an existing background file and edit it as desired. Click the SAVE button but provide a new name. Click the REORDER button to change the order in which the badges print on the sheet. (Each badge on the sheet is "numbered." The badges print from 1 to 2 to 3...When there is more than one column of badges, the print order can change from left to right or top to bottom.)

5. Enter BADGE WIDTH and HEIGHT values. Though the numbers do not have to match the exact actual dimensions of the badge you designed in IDLayout, all badge elements may not display properly if you enter values smaller than the badge's actual size. (To check the actual badge size, launch IDLayout and open the badges you will be printing. Right-click on the badge background to open the Properties of Badge Background dialog. The badge's width and height dimensions are recorded there.)
6. Enter numbers representing how many COLUMNS and ROWS you want on the sheet layout.
7. Enter numbers in the HORIZONTAL and VERTICAL SPACING fields to set how close or far apart the badges are from each other. HORIZONTAL SPACING refers to the distance, in hundredths of an inch, from the top left corner of the *first badge in row one* to the top left corner of the *second badge in row one*. Similarly, VERTICAL SPACING refers to the distance, in hundredths of an inch, from the top left corner of the *first badge in row one* to the top left corner of the *first badge in row two*. Decreasing these values will bring the badges closer together on the layout. Increasing these numbers will spread the badges farther apart.

8. Enter numbers in the FIRST BADGE X & Y fields to set where, on the sheet layout, the first badge will print. The X & Y fields refer to the distance, in hundredths of an inch, of the top left corner of the first badge in row one to the top left corner of the printer's printable area. Reducing the First Badge X number brings the first column of badges closer to the left edge of the page. Reducing the First Badge Y number brings the first row of badges closer to the top edge of the page.
9. Check the OVERRIDE BADGE DESIGN check box if you want to print a badge other than the one currently assigned to the individual(s). An Open dialog appears allowing you to select an alternate badge to print. Using the OVERRIDE BADGE DESIGN option allows you to create rosters. To do so, launch IDLayout and create a "badge" containing the information you want displayed on the roster. Create one design for Varsity Football players, another design for each school bus and route, etc. Select each of those "badges" as desired for the alternate. The end result is your roster.

Section 3.4

Database Management

You arrive at the Database Management window by clicking TOOLS➲CONFIGURATION ➲DATABASE MANAGEMENT.

The ability to store and retrieve records in a database is one of the reasons that make ID Card Maker such a powerful tool. You may create a record for each individual in your organization, and enter as much information as you need such as: name, address, employee ID, position in the organization, as a few examples. You may instantly retrieve the record to review or edit the information, view the person's portrait or assigned badge, capture their image or print their badge. The following pages will provide information about databases in general, and how ID Card Maker's database functionality works. Only the System Administrator may access Database Management. (The Database management button is disabled for all other users.) Our program offers a variety of database options:

- allow end users to add, delete, or modify individual database fields
- specify whether the database tables are stored in a Microsoft Access or ODBC database
- attach to external databases
- more…

While selecting and implementing any of these options is a simple "point and click" operation, database subject matter, by its very nature, is complex and requires considerable explanation and consideration. Therefore, review this entire chapter thoroughly before performing any of the "database management" functions.

Database Options

You have a variety of database options:

- Use the built-in Microsoft Access database "as is." (When you first install ID Card Maker, we automatically create all the database tables and forms that allow our program to be fully functional.)

- Make minor modifications to the way the built-in database fields *look,* such as applying field formatting, input masks, new field labels, etc. (Minor modifications such as these only effect the Microsoft Access *forms*, which are the "windows" through which you look at the data contained in the underlying *table*.

- Make major modifications to the built-in User Field table that stores your actual data, such as deleting fields, or changing a field's name or size.

- You may attach to external database tables, whether generated by our application or another, and whether in a Microsoft Access or ODBC database. Depending on which table you attach to, you may or may not have the ability to modify all the fields and field properties of that table. If attached to a User Field table created by ID Card Maker, whether in a Microsoft Access or ODBC database, you have the ability to edit any of the fields and field properties. If attached to a database table created by any other application, you may only edit how the database fields display in our Search and Personal Data forms.

The options described above essentially relate to two areas of a database: its tables, and its forms.

Database Tables and Forms

Tables

Every database uses tables to store its data. Tables are similar to spreadsheets in that data is physically and logically arranged in columns and rows. Columns represent individual database fields (such as First Name, Middle Name, Last Name, etc.), while rows represent individual records.

When you install our application, it automatically creates a table called “User Fields” to store all the data that you enter into the database. If you wish to record an individual’s address, employee ID number, social security number, date of birth, etc., all that data will be stored in the User Field table. It is called the “*User Field*” table because *you* have the ability to modify or “define” not only what fields are in this table, but the various field properties themselves, such as field size, type, visibility, indexing, etc. If you are attached to any other database table, you may view and edit the data contained within the table, but you cannot modify the table itself (its fields and field properties).

Forms

Since tables are like spreadsheets, the information is presented logically in rows and columns. However, rows and columns are often an inconvenient way to view your data. Therefore, Microsoft Access, upon which our program is based, uses *forms* as an alternate way of viewing the data stored in its tables. Forms are “graphical.” Instead of viewing table data in rows and columns, forms may display data in almost any layout. Forms may be colorful, contain pictures and buttons, and allow database fields to be arranged anywhere in the window. When you are looking at ID Card Maker’s Search and Personal Data windows, you are looking at the forms…the tables that contain the actual data are hidden from view.

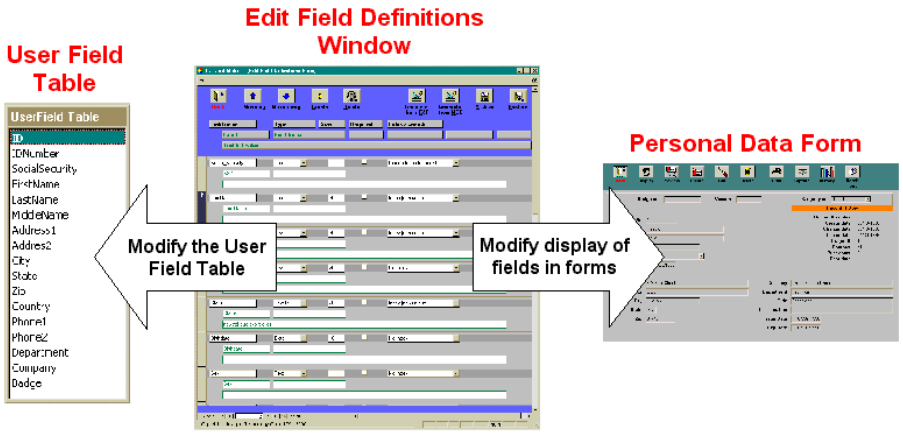
Just as you may modify the User Field table, you may also modify the forms used to display that table’s data. There may be a variety of reasons why you will consider modifying the forms:

- you want your forms to exactly represent the fields in the User Field table
- you do *not* want your forms to exactly represent the fields in the User Field table

Modifying Tables and Forms

When using commercially available database applications such as FoxPro, FileMaker Pro, or Microsoft Access, these applications provide a functional and intuitive way to look at and work with your database fields. They provide tools for adding, deleting and editing the properties of your database fields. ID Card Maker also provides a tool for editing the database fields, whether in the User Field table or the way they display in the Search and Personal Data forms. This tool is the Edit Field Definitions window.

The Edit Field Definitions window is simply a list of database fields—a window or "interface"—allowing you to add, delete, or modify a variety of field properties. The list of fields in this window is called "the current Field Definitions." It is *not* the User Field table, but it is used to *create or modify* the User Field table. The "current Field Definitions" in the Edit Field Definitions window may describe how a field is *supposed to look* in the Search and Personal Data forms. But until you rebuild the forms to "reflect" the way the Edit Field Definitions window describes them, ID Card Maker will only show the default forms when the database was first installed. To make your changes apply to the User Field table or Search and Personal Data forms, you must click either a MODIFY THE CURRENT DATABASE ACCORDING TO THE CURRENT FIELD DEFINITIONS button or REBUILD THE FORMS FROM THE CURRENT FIELD DEFINITIONS button.



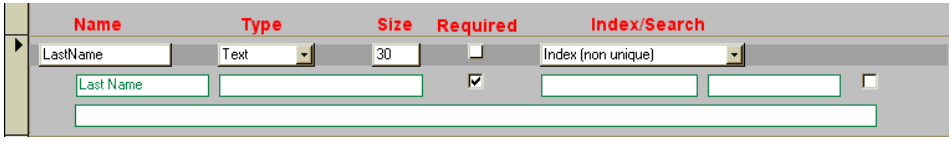
There is an important difference between the User Field table and the Microsoft Access forms that display its data. The User Field table is the actual "storage receptacle" for the data that you enter and save in the database. The table, for all intents and purposes, is hidden from your view—it is virtually invisible. You can create Search and Personal Data forms on which you place individual User Field fields for viewing and editing. The User Field table contains *all* the data. The Search and Personal Data forms only display the data that you instruct them to display. You may elect to have the Search and Personal Data forms display *all* the data in the User Field table, or display only *some* of the data.

Before you begin editing fields, please understand the following critical issue: If you edit fields for display purposes in the Search and Personal Data forms, you can add or delete

the fields and their order of appearance, within the confines of our program. However, if you edit fields for the purpose of changing the User Field table, ***the User Field table must be empty***. (If the User Field table is not empty, unpredictable results may occur.)

When you view the field properties in the Edit Field Definitions window, you see a total of 12 editable field properties for each field. The field properties, however, are broken into two categories: those that affect the User Field table, and those that affect the *display* of fields in the Search and Personal Data forms.

The five field properties that directly affect the User Field table are: *Name, Type, Size, Index,* and *Required*. These field properties are visually distinguished from the other properties by their placement together on the first row of the list of field properties They have a darker gray background than the other field properties. The remaining field properties are listed in the two rows below. .



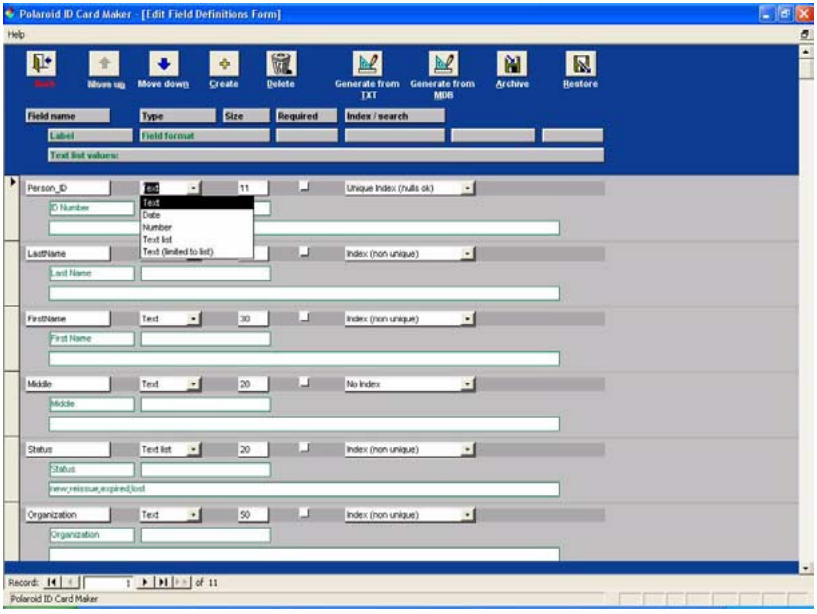
Note: If you are attached to any other database table, you may edit the five field properties relating to the User Field table (Name, Type, Size, Index, Required) in the Edit Field Definitions window, ONLY if you have permissions to edit from the Administrator of the external database.

Edit Field Definitions Window

The Edit Field Definitions window is the tool or "interface" by which you "describe" or "define" a database *the way you want it to be*. You use the Edit Field Definitions window to define the characteristics of your User Field table (the presence or absence of individual fields, as well as field properties, such as name, type, and indexing, etc). You also use the Edit Field Definitions window to describe or define the way you want the database fields to display in the Search and Personal Data forms, such as special formatting, order, default values, etc. The fields and field properties that currently display in Edit Field Definitions window are the "current Field Definitions" referred to in the Database Management window. A variety of buttons there enable you to modify the User Field table or Search and Personal Data forms *based on the current Field Definitions*.

You can access the Edit Field Definitions window by clicking FIELD DEFINITIONS in the Database management window.

Note: You can change, save and create field definitions at any time to create definitions for a custom database. There is no change to the actual database until you Create, Rebuild, or Modify the database from the controls on the Database Management Form.



Edit Field Definitions window

The following buttons appear at the top of the window:

 MOVE UP	MOVE UP makes the currently selected database field move up the order it appears in the Search and Personal Data windows. TAB ORDER (A "record selector" arrow— —appears beside the currently selected field in the left margin of the window.)
 MOVE DOWN	MOVE DOWN makes the currently selected database field move down the order it appears in the Search and Personal Data windows. TAB ORDER (You can change the selected record by left-clicking in the the selection column on the left.)
 CREATE	CREATE makes a new database field appear at the end of the scrolling list of fields.
 DELETE	DELETE deletes the currently selected field. (You can change the selected record by left-clicking in the the slection column on the left.)
 GENERATE FROM TXT	If you exported data from another database and want to use that data *and its fields* in ID Card Maker, click GENERATE FROM TXT. A standard Windows Open dialog box appears. Navigate to and select the database text file you want to import. An alert window asks you to confirm your decision. If you click OK in this window, ID Card Maker will read and import the first line of the import text file which identifies all the database fields being used. *Note: the first line of the import text file must contain the actual field names. Field names in this file must be one word and separated from each other by commas. Note also: good practice suggests that your external database's "export routine" enclose field data within quotation marks so that commas appearing within, for example, a "Company" database field (e.g., "The Gap, Ltd.") will not be construed as a field delimiter. (See "Export File" on page 95 for an example of the required "first row" in an import text file.)* After generating the fields and field properties from the import text file, view each field in this window to confirm that the field properties meet your needs.

GENERATE FROM MDB	If you wish to use the "fields" and "field properties" of an existing Microsoft Access database, click GENERATE FROM MDB. A standard Windows "open dialog" appears in which you navigate to and select an Access 2000 only ".mdb" database file. Once you have selected the Access database file, a second window appears in which you may select the specific table containing the database fields you wish to use. After generating the fields and field properties from the database file, view each field in this window to confirm that the field properties meet your needs.
ARCHIVE	This button will create a "Field Definition" file—a text file containing all the information about every database fields displayed in this window. That is, it will identify each field and its "label," "size," "input mask," and other properties and write it to a text file with ".fdf" file extension. If you edited the Field Definition in this window and want to return to the Field Definition currently in use by your database, simply re-attach to that database file using the ATTACH TO AN EXISTING DATABASE button in the Database Management window.
RESTORE	If you want to access ID Card Maker on one or more PC's use the database fields stored in an archived Field Definition file, click RESTORE to bring up a standard Windows open dialog in which you navigate to an archived Field Definition file. Restoring field definitions is like importing records: you are importing "fields" and "field properties" into the User Field table which is shared by one or more PC's. *After restoring or "importing" the fields definitions, you must rebuild your ID Card Maker database on each PC attached to that database to display those new fields.* If you are attached to a non-ID Card Maker-generated database, you may use RESTORE to load the parameters to the definition. Then rebuild the forms to *display* of data in ID Card Maker's forms.

In the main body of the Edit Field Definitions window, a scrolling list of every field currently being used by the database is displayed. You may modify the individual field properties for each field. However, before you begin, please understand the following critical issue: If you edit fields for the purpose of changing the User Field table, the database must be empty. There are five fields' properties that directly affect the User Field table: *Name, Type, Size, Index/Search, Required*. These field properties are visually distinguished from the other properties in the Edit Field Definitions window by their placement together on

the first row of the list of field properties. They have a darker gray background than the other field properties.

The following table describes the field properties that may be modified:

Property	Description
Name	This is the name of the field used by the database. The field name must be one word. To use multiple words for the field's name, either delete the space between them (e.g., "multiplewords"), or separate the words with an underscore character (e.g., "multiple_words"). A field name may be up to 20 characters long. Field names must use alphanumeric characters; the only special character allowed is the underscore (_) character.
Label	The field's label is a friendly version of the actual field name. Sometimes a field's name as used by the database needs to be abbreviated. But when that field is placed on a database form, it can be given a label that makes it easily identified. The field's label can be more than one word and may contain spaces. If you do not specify a label, the field's "field name" will be used by default.
Visible	This property makes the field visible or hidden on a workstation. (Removal of the check mark makes the field hidden.) For example, one workstation can have a field "unchecked" and therefore hidden, while another workstation can have the same field "checked" and thus visible.
Type	The field may be of five types: *Text*, *Number*, *Date*, *Text List* or *Text (limited to list)*. A *Text* field allows the entry of any keyboard character. A *Number* field allows only numbers. A *Date* field allows alphanumeric entry, but treats the data as a date. A *Text list* is a "pick list" in which you may either select from a predefined value or enter your own values. A *Text (limited to list)* is a "pick list" in which you may only select a value from a predefined list of values.

Level I
Level II

Property	Description
Size	Typing a number in the size property field lets you to set the maximum number of characters the field allows. When setting the size for telephone, social security and zip code fields, remember to allow extra characters for the hyphens and parentheses between numbers. In addition, try to anticipate the longest entry that a certain field might contain (for example, a lengthy, hyphenated last name). The physical dimension of the field in the Personal Data and Search window shrinks or expands depending on the size you enter here. Attention to future importing and exporting needs should also be considered. If you have a 75-character "address" field in your database, and use all available characters, exporting that data to a database whose "address field" is restricted to 15 characters will result in truncated or lost data.
Required	This property makes a field "required." That is, when you check this option, a user *must* enter data in this field. *Note: If you make a field "Required" and import data containing records in which this field is empty, those records will not import.*

Property	Description
Index/search	When you select a field to be indexed, the database builds an invisible "list" of the contents of that field for every record. When performing a search in that field, the database first looks through its "list" before actually searching through the database itself; doing so greatly improves the speed of your database queries. Also consider indexing fields you intend to use in reports; even if you don't anticipate using the field in a typical database search, doing so will speed up the creation of reports. The speed of searches and performance of other database functions, such as the creation of new records, is slower with more indices, which also increases the size of the database. Fields that are indexed are automatically placed in ID Card Maker's Search window. There are four index options. • No Index: Does not build an index for that field. • Index (non unique): Builds an index for that field and allows duplicate entries in the database's records (more than one "Smith" in a last name field). • Unique Index: Builds an index for that field, but requires that no two records have the same value. (It would be permissible for a last name field to contain duplicate values, such as "Smith," but not permissible for an "Employee Number" field to contain duplicates.) • Unique Index (nulls OK): Builds a unique index (prohibiting data entry into a field if the value is already used in another record), but allows that field to be empty.
Field format	This field property allows you to apply Microsoft Access formatting to control how data in that field is *displayed*. For example: • To make text appear in a color, type (without quotes) "@[red]" (you may substitute any other RGB color in place of "red.") • To force text to upper case, type ">" • To force text to lower case, type "<" • To combine lower case with a color, type "<[red]" • To add a prefix of 3 leading zeros, type "!000"

Property	Description	
Protected	Individual database fields may be view- or edit-protected on a user-by-user basis. If a field's protected property is checked, and a user is restricted from viewing or editing protected fields in the User Permission window of ID Card Maker, that field will be protected accordingly.	Level I Level II
Input mask	You may automatically insert characters such as dashes and parentheses in fields with an input mask. For example, you can force the inclusion of dashes or parentheses in telephone and social security numbers. Note: Use the Input Mask property to display literal display characters in the field with blanks to fill in. For example, if all phone numbers have the same format, you can create an input mask, which automatically supplies the parentheses and dashes. If you define both a display format and an input mask for a field, Microsoft Access uses the input mask when you are adding or editing data, and the Format setting determines how the data is displayed when the record is saved. When using both Format and Input Mask properties, be careful that their results don't conflict with each other. (See "Input Masks & Field Formatting" on page 187.)	Level I Level II
Default value	You may enter a default value (such as the word "NONE") in a field. Until the user over-writes the word "NONE" with other data, the default value remains visible in the field. You must enclose the value within quotes.	Level I Level II
Text list values	For text lists and limited lists, type the values you want to appear in the list box. Separate values with semi-colons. To add a blank line in the list, type two semi-colons with nothing between them (;;).	

When creating new fields, ensure that you do not use our program's reserved field names. Use of these fields will produce unexpected results. Our program uses the following field names:

Reserved field names
IDNumber
BadgeNumber
BadgeVersion
Badgelayout
CreateDate
PrintDate

ImageDate
ImageID
ChangeDate
Operator
PrintCount
BadgeStatus
BadgeNo
MagTrack1
MagTrack2
MagTrack3
Expression1
Expression2
Expression3
BothNames
Barcode
IDNo
IDYes

When you add or delete fields, or modify the field properties in the Edit Field Definitions window, absolutely nothing is affected until you either click one of the "database management" buttons in the Database Management window.

The following buttons affect the User Field table or the Field Definition file:

REBUILD THE FORMS FROM THE CURRENT FIELD DEFINITIONS

Clicking this button will rebuild the Search and Personal Data *forms* based on the data displayed in the Edit Field Definitions window. "Forms" are a graphical alternative to viewing data in the rows and columns of database tables. If you edited database field properties that affect the forms, the forms must be rebuilt before your changes can be viewed. Rebuilding the forms has no affect on the actual data or database tables.

MODIFY THE CURRENT DATABASE ACCORDING TO THE CURRENT FIELD DEFINITIONS

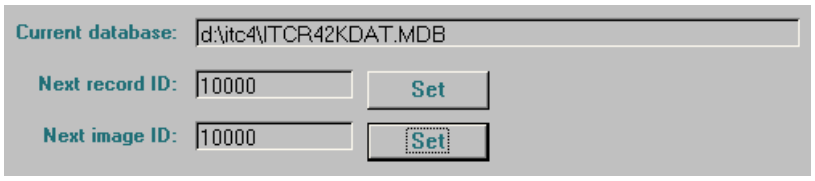
If you 1) edited database field properties (such as deleting a field or changing a field's name, size, type, or index) in the Edit Field Definitions window, or 2) used the "Restore" button to import a new set of Field Definitions from an archived Field Definition file, you must rebuild the database tables and forms before the changes are visible. This button is not available if you attach to a non-IDCM-generated database (e.g., a pre-existing Human Resources database).

CREATE A NEW COPY OF THE CURRENT DATABASE

This will create an exact copy of the existing database, complete with the database fields in the User Field table, and all the existing data.

Database Management window

At the top of the Database Management window is a non-editable "Current database" text field identifying the path and name of the database to which you are currently attached.



Below "Current database" are two SET buttons: NEXT RECORD ID and NEXT IMAGE ID.

These SET buttons may be used to over-ride ID Card Maker's use of incremental serial numbers when creating "names" for images that are saved to disk or for "primary key" numbers to uniquely identify each database record. These buttons might be useful for organizations that have remote worksites where a mobile badge issuing system is used to capture images and print badges. Using the Set options to start numbering records with a higher number, the mobile system can create records and capture images remotely without fear of duplicating existing image or record ID's.

Click the SET buttons on the workstation for which you wish to over-ride the automatic serial numbering of image and record ID's. A dialog appears in which you may enter a

new starting number for the image or record ID. The dialog informs you of the last (highest) number currently used in the database. Enter a new starting number sufficiently high enough that it is unlikely the central database will ever use it. Do this for both image ID and record ID.

Two radio buttons offer the selection of either Microsoft Access or ODBC database management functions. The database options change somewhat depending on whether MS Access or ODBC is selected. If ODBC is selected, the buttons appearing below will effectan ODBC data source. If MS Access is selected, the buttons appearing below will effect a Microsoft Access database.

Note that ODBC is only available in Level III..

The following buttons are present in the Database Management window when MS Access is selected:

ATTACH TO AN EXISTING DATABASE

Click this to access data from another Microsoft Access 2000 database. The database may be an existing ID Card Maker or ID Card Maker database or any other Microsoft Access database. Clicking this button opens a standard Windows "Open dialog" to navigate to a Microsoft Access database. If you attach to a non-ID Card Maker-generated database, you will be prompted to select the specific table containing the data you wish to access, and the primary key for that table.

If you are attaching to a non-ID Card Maker-generated database, and its "primary key" field is not numeric, you are neither allowed to edit data in the field designated as the "key field" nor create or delete records.

When attaching to another database, always answer YES to the prompt to rebuild the Search and Personal Data forms. If you do not rebuild these forms, some of the data may not display.

Please note: If the database to which you wish to attach has been "secured" or "password-protected" in any way, our application may not be able to attach to it. Our application will attempt to detect if a password and/or user name is required in order to gain access, and present a Password Dialog allowing the user to enter the required information. However, the developer of the third-party database may be required to modify the user permissions or application code itself to allow our application to attach to it.

Level I

CREATE NEW DATABASE FROM THE CURRENT FIELD DEFINITIONS

Clicking this button will create an empty database based upon the current Field Definitions. The current Field Definitions are the fields and field properties, which are displayed when you open the Edit Field Definitions window. Clicking this button will rebuild the User Field table and re-generate the Personal Data and Search forms to reflect the fields and field properties in the Edit Field Definitions window.

If you accidentally modify the Field Definitions and after rebuilding the forms experience undesirable results, you may restore the original Field Definitions by re-attaching to the database (table).

Level I

CREATE A NEW COPY OF THE CURRENT DATABASE

Make a copy of the current database, including all its records. This is an ideal way to backup or archive your database. For example, you may create a copy of your database named “db_2000.mdb” at the end of the year, then delete all the “history” and/or old records in your current database. If you ever need to review the “old information,” you simply attach to the copy to see the data as it existed in 2000.

MODIFY THE CURRENT DATABASE ACCORDING TO THE CURRENT FIELD DEFINITIONS

Clicking this button will rebuild the User Field table and the Search and Personal Data forms based on the Field Definitions in the Edit Field Definitions window if your database is *currently empty*. If your database is *not empty*, our program will offer you several options:

Rebuild only the forms: The Search and Personal Data forms can always be rebuilt and re-drawn to reflect your current Field Definitions without affecting the underlying data in the User Field table. An alert message will offer this option if your database contains even a single record.

Delete existing data and Rebuild the User Field table and forms: If your database contains even a single record and the modified field properties affect the underlying User Field table, you will be prompted to create a new database. This means that the User Field table will be rebuilt to reflect your changes, but first, the data in the User Field table must be deleted. You will be prompted to confirm this in the next prompt.

Rebuild the User Field table and forms without deleting existing data: If your database contains even a single record and one of your modifications in the Edit Field Definitions window was to add a new field, you may partially rebuild the User Field table to reflect the new field without implementing other field modifications which require that the table be empty and without deleting your existing data.

This button is not available if you attach to a non-ID Card Maker-generated database (e.g., a pre-existing Human Resources database).

EDIT FIELD DEFINITIONS

This takes you to an Edit Field Definitions window where you have a variety of options for setting the field properties of database fields. (See “Attaching to Another Database” on page 79.)

REBUILD THE FORMS FROM THE CURRENT FIELD DEFINITIONS	Clicking this button will rebuild the forms. “Forms” are a graphical alternative to viewing data in the rows and columns of database tables. If you edited database field properties, which affect the forms, the forms must be rebuilt before your changes can be viewed. Rebuilding the forms has no affect on the actual data or database tables. (See “Modifying Tables and Forms” on page 61.)
DELETE ALL RECORDS IN THE CURRENT DATABASE	If in the Edit Field Definitions window you delete a field, change a field’s name, size, requirement status or index property, those modifications will not be implemented when you later rebuild the database tables and forms. To implement these kinds of changes, the database must be empty, i.e., contain no records. Clicking this button deletes all the records in the database! Before deleting your records, export your data to a text file using ID Card Maker’s Export command (See “Exporting the Entire Database” on page 95.) If you add new fields to the Field Definition file and try to rebuild the database tables and forms without first emptying your database, ID Card Maker will add the new fields to the table of User Defined Fields. If you restore a previously created Field Definition file and try to rebuild the tables and forms without first emptying your database, the fields from the restored file will be added to the existing list of database fields.
CONVERT A REV 3 ACCESS 97 DATABASE TO THE CURRENT VERSION	If you have databases created by ID Card Maker or ID Card Maker version 3.xx, clicking this button will convert the database to version 4.

ODBC databases are inherently more complex than Microsoft Access databases, therefore it is advised that an experienced Database Administrator perform these database functions.

Before you can attach to an ODBC data source, you must run the “ODBC Data Source Administrator” (Control Panel➲ODBC Data Sources (32bit) to create a user or system Data Source (DSN). Ask your Database Administrator to verify that this has been done, and to provide you with pertinent information.

Click the ODBC radio button in the Database Management window to display the Database management buttons pertaining to an ODBC database.

The following buttons are present in the Database Management window when ODBC is selected:

ATTACH TO AN EXISTING DATABASE	Clicking this button opens an ODBC logon window in which you enter the Server Name (the DSN, or Data Source Name), UserID, and password for an ODBC database. Your Database Administrator must provide this information to you as it is generated outside the ID Card Maker environment. When attaching to another database, always answer YES to the prompt to rebuild the Search and Personal Data forms. If you do not rebuild these forms, some of the data may not display. (See "Attaching to Another Database" on page 79.) When attached to non-ID Card Maker-generated database, you are not allowed to edit data in the field designated as the "key field" or create or delete database fields.
DELETE ALL RECORDS AND REBUILD AN ODBC DATABASE	ID Card Maker uses a variety of tables to record employees, authorized application users, history and audit logs, etc. To create an ID Card Maker database identical to the Microsoft Access version in an ODBC database, click this button. You will be prompted to select the ODBC database in which ID Card Maker will create all its tables. ID Card Maker will delete any records that exist in the ODBC database you specified.
EDIT FIELD DEFINITIONS	This takes you to the Edit Field Definitions window where you have a variety of options for setting the display of database fields. (See "Attaching to Another Database" on page 79.) Note: modifying field properties only affects the way fields are *displayed* at individual workstations; it does not affect the actual database tables.

REBUILD THE FORMS FROM THE CURRENT FIELD DEFINITIONS	Clicking this button will rebuild the Search and Personal Data forms to reflect the "current Field Definitions" (the database field information that currently displays in the Edit Field Definitions window). "Forms" are a graphical alternative to viewing data in the rows and columns of database tables. If you edited database field properties that affect the forms, the forms must be rebuilt before your changes can be viewed.
DELETE ALL RECORDS IN THE CURRENT DATABASE	If you are attached to the User Field table created by ID Card Maker on an ODBC database, you may not add or delete database fields, nor edit certain field properties, if the User Field table contains records. This button will delete your records allowing you to change database field properties such as "field name," "field size," "field indexing," etc.
CONVERT A REV 3 ACCESS 97 DATABASE TO THE CURRENT VERSION	If you have databases created by ID Card Maker or ID Card Maker version 3.xx, clicking this button will convert the database to version 4.

Attaching to Another Database

There are several basic types of Database Management Systems (this is the formal name for database applications), or DBMS for short. Typical commercial DBMS's are Microsoft Access, FoxPro, FileMaker Pro, SQL Server, and Oracle. In general, they all store and manipulate the data that users need to manage and work with. Each DBMS has its own "database engine" and "working environment" that enable users to edit, save and view data, as well as perform typical database functions such as running queries, creating reports, establishing "relationships" between different data sources, and modifying the display of data.

While there are any number of DBMS's, there are two types; **Workstation** DBMS's and **Server** DBMS's. Workstation DBMS's are designed to handle small- to moderately-sized databases. Individuals and small businesses are adequately served with these systems: a typical desktop computer is powerful enough to run the software, and the program will probably perform most of the database functions that a small organization might need. Server DBMS's, however, are much more powerful and complex. They typically require

the raw processing power of an application server (a special computer with extremely powerful, if not multiple, microprocessors, extra RAM, and multiple fixed disks). These programs are so complex that they normally require a "Database Administrator" to create, maintain, and supervise database activity and functionality.

"Out-of-the-box," ID Card Maker, by default, creates a database in Microsoft Access, a Workstation DBMS. Maintaining a Microsoft Access database is relatively easy for anyone with general computing knowledge.

ID Card Maker also has the ability to create a database in a Server DBMS. In this case, our program will still use Microsoft Access as the "front end" (what the user experiences at his or her workstation), but communicate with the Server DBMS through an industry standard Open Database Connectivity (ODBC) driver. If you wish to use an ODBC database (that is, a Server DBMS created either by ID Card Maker or another application), your Database Administrator must perform all the ODBC database setup before ID Card Maker can begin functioning with it.

ID Card Maker has the ability to "attach" to database tables, whether created by ID Card Maker or not. "Attaching" or "linking" means that you can view the data from another table within our program. (ID Card Maker and its run-time version of Microsoft Access is the "front end"—it displays the data regardless of the type of application that created it at the "back end.") If ID Card Maker created the table, after you are attached, you may modify the database fields in the User Field table. If the table was not created by ID Card Maker, you may only view and edit the *data* contained within that table; you may not edit the data contained in the database field used as the table's "key field."

If you selected the MS Access radio button in the Database Management window, clicking ATTACH TO AN EXISTING DATABASE opens a standard Windows Open dialog allowing you to select a Microsoft Access database. (Microsoft Access databases have an ".mdb" file

extension.) Once selected, a second window appears in which you select the individual table within the database to which you wish to attach. (Note: If you are attaching to another ID Card Maker database, you are attached as soon as you specify the "*.mdb" file; ID Card Maker automatically knows to attach to the User Field table.) When attaching to any database, always answer YES to the prompt to rebuild the Search and Personal Data forms. If you do not rebuild these forms, some of the data may not display.

Please note: If the database to which you wish to attach has been "secured" or "password-protected" in any way, ID Card Maker may not be able to attach to it. ID Card Maker will attempt to detect if a password and/or user name is required in order to gain access, and present a Password Dialog allowing the user to enter the required information. However, the developer of the third-party database may be required to modify the user permissions or application code itself to allow our application to attach to it.

If you selected the ODBC radio button in the Database Management window, clicking ATTACH TO AN EXISTING DATABASE opens an ODBC logon window in which you enter the Server Name (the DSN or Data Source Name), UserID, and Password of the ODBC data-

base. (Your Database Administrator must provide this information to you as it is generated outside our program environment.) After successfully logging on to the ODBC database, a second window appears in which you select the individual table within the ODBC database to which you wish to attach. When attaching to another database, always answer YES to the prompt to rebuild the Search and Personal Data forms. If you do not rebuild these forms, some of the data may not display.

Added Security with Field Definition files

The ability to rebuild the forms without modifying the database tables adds a new level of security to ID Card Maker. Thus, there are three approaches to protecting your data from view by unauthorized users:

User level security: In the User Permissions window, deselect "View protected fields" and "Edit protected fields" for specific users. In the Edit Field Definitions window, check the "Protected" field property for fields you wish to protect from specific users.

Workstation level security: At specific workstations, uncheck the "Visible" property of specific database fields from the Field Definitions Edit window. Then rebuild the forms at that workstation using the REBUILD THE FORMS FROM THE CURRENT FIELD DEFINITIONS button. Those fields will not be visible to anyone, regardless of the user's application permissions.

Multiple field definitions files security: In a large network running a variety of configurations of our program, create specific Field Definition files for each configuration.

Customizing database fields for a networked environment takes careful planning. You must know which fields must be visible or hidden at specific workstations, and if specific field formatting is required at different sites. For example, if several "guard verification stations" are to be restricted from viewing certain information in the database, then a Field Definition file needs to be created which hides that data. Or if a number of "data entry stations" need to have certain fields color coded to ease data entry, then a Field Definition file must be created specifically for them. A Field Definition file is a text file containing a list of database fields, plus each field's "properties," created when you click the ARCHIVE button in the Edit Field Definitions window. (See below.) You may create as many Field Definition files as your needs require. You will then restore or "import" these Field Definition files at the appropriate workstations; the workstation-specific modifications will now be displayed on those PC's after you rebuild the database.

From any workstation, click TOOLS➲CONFIGURATION➲DATABASE MANAGEMENT➲FIELD DEFINITIONS**.** Make any changes you require for your "master" database (that is, create, delete, or modify the fields that you want to use for your database) and click ARCHIVE. A standard Windows "Save dialog" appears in which you enter a name and directory for this master Field Definition file. Modify the field definitions again for a workstation whose view of the data will be different in some manner (hidden/visible fields, colored text, input masks, etc.) and again click ARCHIVE to save this modified Field Definition file. Continue to create additional Field Definition files for as many workstations as your needs require. Then, at each workstation, restore or "import" the appropriate Field Definition file using the RESTORE button and rebuild the database by clicking the REBUILD THE FORMS FROM THE CURRENT FIELD DEFINITIONS button.

If you are running ID Card Maker in a "stand alone" environment, you do not need to create Field Definition files. Simply change the existing fields and their properties to suit your needs and rebuild the database and forms using the MODIFY THE CURRENT DATABASE ACCORDING TO THE CURRENT FIELD DEFINITIONS button.

Section 3.5

Importing

ID Card Maker offers two types of importing: “simple” and “advanced.” A “simple” import will append, if possible, data from an ASCII text file to the ID Card Maker database. Advanced import, on the other hand, offers you control over whether you will add or update records, whether the data resides in a text file or within a database table, plus the ability to “map” fields between the source and destination files. You arrive at both import options by clicking TOOLS➲IMPORT or TOOLS➲ADVANCED IMPORT.

Importing

ID Card Maker imports data from any comma-delimited ASCII text file. There are only two requirements of the file to be imported: 1) the text file must be comma-delimited, and 2) the field names in the text file must exactly match the field names ID Card Maker uses.

Comma-Delimited:

There are a variety of export formats (e.g., “dbf,” “tab-delimited,” “SYLK,” etc.). “Comma-delimited” means that the contents of the database are “dumped” in a text file, logically arranged in columns and rows. The database fields represent the “columns” and are separated from each other by commas; the “rows” represent each record in the database. You can see in Figure 1 on page 95, though the data does not line up perfectly with the names of the fields on the first line, ID Card Maker keeps track of the commas separating the field names and content of the fields from each other.

It is advisable that the application exporting the data encloses the data within quotation marks (“”). Otherwise, commas appearing within the data itself (e.g., “The Gap, Ltd.”) might be mistakenly construed as field delimiters.

Field Names Must Match:

If the field names (columns) of the export text file exactly match the field names used in ID Card Maker, ID Card Maker extracts the textual data from all the records in that column and inserts it into the corresponding field in the ID Card Maker database. The order in which the fields appear (from left to right) do not have to match; ID Card Maker will recognize the fields as valid and correctly import them into its own corresponding fields.

The comma-delimited text file must contain a "header" or "first row" identifying the names of each field. Before you try to import the data from the export text file, open the text file in a text editor and 1) verify that the first line of the text file contains the names of the database fields, 2) verify (and edit if necessary) that the field names exactly match ID Card Maker's equivalent fields, and 3) you may optionally enclose each field name in quotation marks. Each field name must be separated from the others by a comma, with the comma falling outside the quotation marks. Depending on the text editor you use, all the field names may not physically fit on one line. In that case, allow your word processor's automatic text wrap to continue your field names on the second and third lines, with you entering a carriage return (Enter key) only when you finish all field name entries. When you finish editing the export text file, save it as a plain ASCII text file. ID Card Maker's IMPORT function only imports ASCII text files. If a field name in the export text file does not match exactly, then ID Card Maker assumes that all the data for that column in the rows below do not belong in the ID Card Maker database; the data in that field will not be imported.

If you do not want to import data from a field whose name exactly matches a field used in ID Card Maker, rename the field in the export file to one not used by ID Card Maker (e.g., "not_used," or "skip"). Because the field names will not match, ID Card Maker ignores the data in those fields.

*Important! The **Import** button uses the field "IDNumber" in our application as the key field to compare records between two databases. Therefore, the source data file must also contain a field named "IDNumber" which stores a unique number for every record. (If the source file uses a differently-named field (e.g., EmployeeID), rename it in a text editor to "IDNumber.") If the source data file contains records whose value in the IDNumber field is already in use by some of our application's records, those records will not be imported.*

Importing a File

Click IMPORT in the Tools window. A Windows Open dialog allows you to navigate to the text file containing the import data. Select the file and click OK. ID Card Maker prompts

you to confirm the action, then imports the data. It is now viewable in the Personal Data window.

Advanced Import

The Import button in the Tools window only imports data that resides in a comma-delimited ASCII text file. While 100% effective as an import procedure, an ASCII text import requires numerous, and sometimes tedious, steps, such as exporting data from the source database, verifying or editing data for commas, quotation marks, and field names, etc. On the other hand, the Advanced Import allows you to open the source database directly and "map" the fields between ID Card Maker and the source file.

Launch Advanced Import by clicking Advanced Import in the Tools window. The Advanced Import window opens.

Advanced Import window

The Import text button launches a series of prompts in which you will specify the type of file containing the data you wish to import, and whether you are adding, updating, or adding AND updating existing records. The Merge images button launches a series of prompts allowing you to import images associated with the records you imported.

The text fields in the lower portion of the Advanced Import window display information about your previous import.

The process of importing or updating records requires you to select a field for use as a comparator. Sometimes called a “primary key” or simply “key field,” this field is used to compare records between two databases. If the data in this field is the same, it is assumed the records in each database refer to the same individual. If the data does not match, it is assumed that the records refer to different individuals. Before you proceed, therefore, you must determine the following critical information: is the data in the “key field” in the import file the same as data in the equivalent field in the existing database? In order to *update records that already exist*, the data in the “key field” must be identical. In order to *add new records* to the database, the data in the “key field” must NOT be identical. Depending on which type of import you perform, you may overwrite data in the database with information in the import file.

Import Text

Click the Import text button to open the File Select window. There are four options.

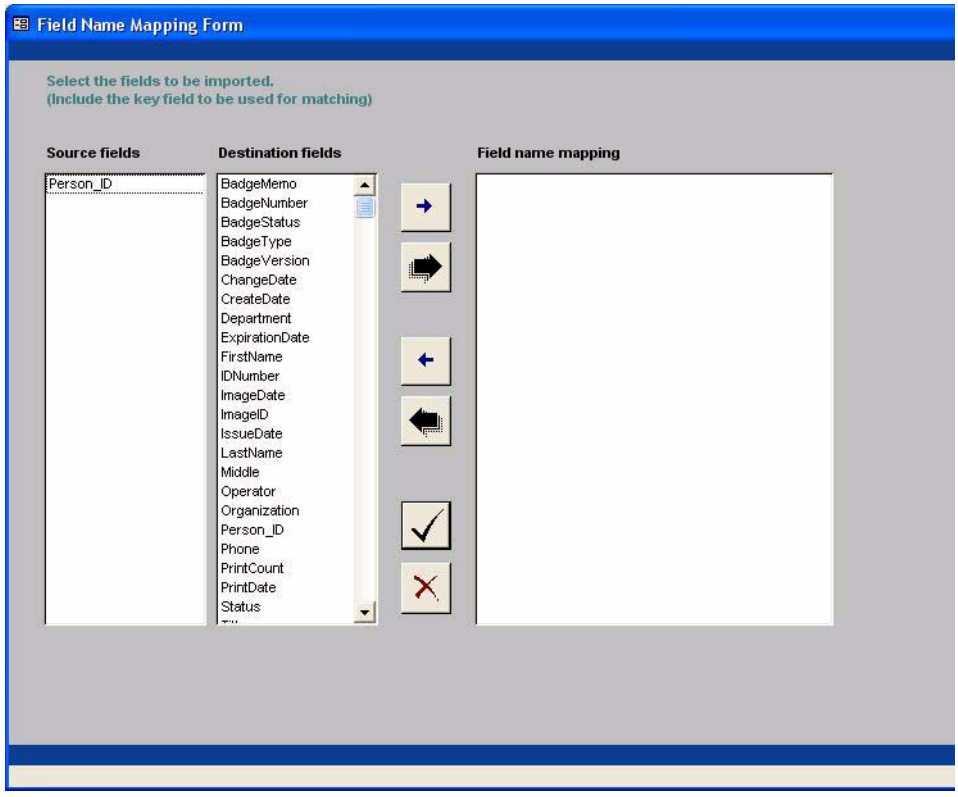
Compatible IDCM text file	This is a comma-delimited text file exported from an ID Card Maker database. When this is selected, a Windows Open dialog looks specifically for a text (*.txt) or comma-delimited (.csv) file. Use this option ONLY if you have verified that the field names and field properties in the import file *exactly* match the fields in the existing database. ID Card Maker will automatically use the “IDNumber” field as the “key field” to compare records in both databases.
Text file	This is a comma-delimited text file exported from any other database. When this is selected, a Windows Open dialog looks specifically for a text (*.txt) file. With this option, a “field mapping” window will open allowing you to “map” fields from the import file to the ID Card Maker database. You will have an opportunity to specify the “key field” for use as a database comparator.

Compatible IDCM database	This is the "*dat.mdb" file of an ID Card Maker database. When this is selected, a Windows Open dialog looks specifically for a Microsoft Access 2000 (*.mdb) file. Use this option ONLY if you have verified that the field names and field properties in the import file *exactly* match the fields in the existing database. (Unless you copy or rename your database, the name of this file is "IDCMR4DAT.mdb.") ID Card Maker will automatically use the "IDNumber" field as the "key field" to compare records in both databases.
MS Access database	This is the "*.mdb" file of any other Microsoft Access 2000 database. When this is selected, a Windows Open dialog looks specifically for a Microsoft Access 2000 (*.mdb) file. Using this option, you may select the specific table within the database whose data you wish to import, as well as "map" the fields from the import file to the ID Card Maker database. You will have an opportunity to specify the "key field" for use as a database comparator.

After selecting a file type in the File Select window, an Add/Update Select window opens. The three choices are:

Add new records	ID Card Maker will use a “key field” to compare the records in the import file to the records in the ID Card Maker database. If the data in the “key field” of any records of the import file *are not* identical to data in ID Card Maker’s “key field”, ID Card Maker assumes that those individuals do not exist in the ID Card Maker database; those records *will be imported*. All other records will be ignored.
Update existing records	ID Card Maker will use a “key field” to compare the records in the import file to the records in the ID Card Maker database. If the data in the “key field” of any records of the import file *are* identical to data in ID Card Maker’s “key field,” it is assumed those records refer to the same individual and those records will be updated. That is, those records in the ID Card Maker database will be over-written with data in the import file. All other records will be ignored.
Add or Update	ID Card Maker will use a “key field” to compare the records in the import file to the records in the ID Card Maker database. If the data in the “key field” of any records of the import file *are* identical to data in ID Card Maker’s “key field,” ID Card Maker will overwrite those records with the data from the import file. If the data in the “key” field is *not* identical, ID Card Maker will add those records to the database.

If you are not importing a “compatible IDCM text file or database,” after selecting an option in the Add/Update Select window, a Field Name Mapping window appears displaying two “panes:” left of the arrow buttons are the names of fields in the *Source* (import) file and *Destination* (ID Card Maker) database; right of the arrow buttons are the mapped fields.



If fields in the source are not the same as the fields in the destination, yet contain equivalent data, you may "map" them. You may instruct ID Card Maker to insert data from a field in your database into any specified field in ID Card Maker's database. Click once on the field name in the Source column and click on its equivalent in the Destination column.

After clicking the button, those two fields will display side-by-side in the right pane.

If you *double-click* on a field in either the Source or Destination column, ID Card Maker will automatically search for an identically- or similarly-named field in the other column. If an identically- or similarly-named field exists, ID Card Maker assumes they each contain equivalent data and maps them. (For example, if our program uses the field named

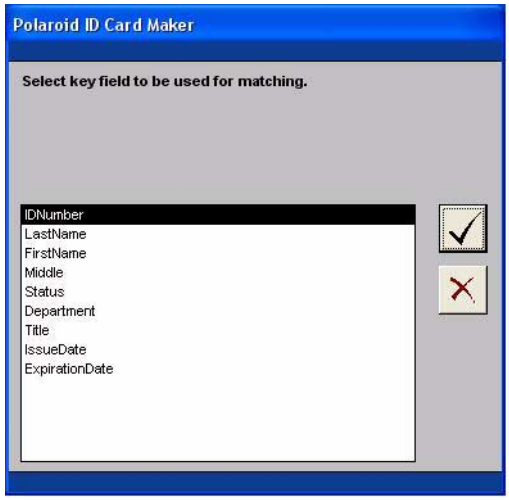
"LastName," it will automatically map "lastname," "Last Name," or "Last_Name.") Single-clicking a field and clicking the button performs the same action.

If you click the button, ID Card Maker searches all fields in both the Source and Destination files and maps those that are spelled identically or similarly. The mapped fields are displayed in the right pane.

To "un-map" fields, select the mapped fields in the right pane and click the button, or click the button to un-map all fields.

When satisfied that the fields are correctly mapped, click the button. Click to cancel the import.

If you are not importing a compatible IDCM text file or database, a Select Key Field window appears next. You must specify the unique field to be used as the "comparator" for the two databases.



The Select Key Field window displays all the fields in the Source (import) file. Select the field which corresponds to ID Card Maker's "IDNumber" field. *The field you select must contain unique numbers.* Click the button to continue. ID Card Maker calculates how many records may be added, updated, or added and updated, and prompts you to continue. You are notified if the import was successful or unsuccessful.

Merge Images

Click Merge images at the top of the Advanced Import window to import the images associated with records you have imported. In the Select file type window that appears,

select the correct file type: Compatible IFW text file, Text file, Compatible IFW database, or other Microsoft Access database.

Polaroid ID Card Maker
Select type of data file to import from.
1: Compatible IFW text file
2: Text file
3: Compatible IFW database
4: MS Access table

Select the correct file in the following Windows Open dialog.

If you did not choose an IDCM compatible text file or database in the previous window, two Select Key Field windows appears in which you first specify the “key field” in the Source (import) file, and second, specify the corresponding field in the ID Card Maker (destination) database.

Next, you are presented with a window displaying all your Source (import) file's fields. You must select the field that contains the identifying name or number of the images. (For example, ID Card Maker stores the image names in the "ImageID" field.)

Lastly, in the following dialog, enter the path to the folder where your import file's image files are stored. ID Card Maker reports that the images were successfully or unsuccessfully imported.

Section 3.6

Exporting

You export your data by clicking TOOLS➲EXPORT or TOOLS➲EXPORT SELECTED RECORDS.

Exporting the Entire Database

Exporting an ID Card Maker database lets you create a comma-delimited text file containing all the text data for every record in the database.

1. Click EXPORT. A Windows Save As...dialog opens where you are prompted to enter the path and name for the export file you want to create. Click OK.
2. An alert message confirms that the export text file was written as you specified. You may now import the data in this file into another database. Click OK.
3. From within Windows Explorer, open the export text file you just created. Though the data does not line up evenly, you can see that the data in each line follows the same order. The first line of the text file identifies the names of the database fields. In the rows below, the contents of each of the database fields is listed in the same order. In both the first line and all subsequent lines below, the field name and field contents are separated by commas.

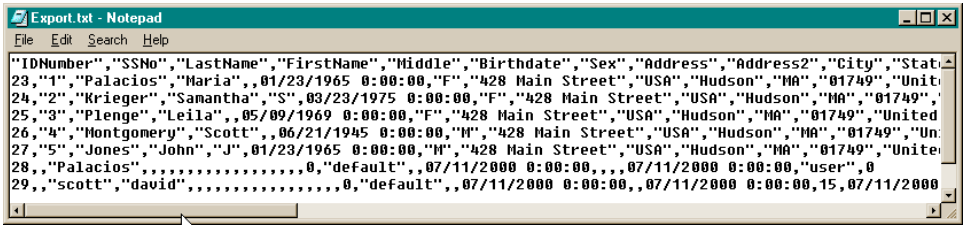


FIGURE 1. Export File

Exporting a Group of Records

In addition to EXPORT, there is an EXPORT SELECTED RECORDS button with a "Selection from report list:" pick list immediately below. The EXPORT SELECTED RECORDS button is disabled until you select a query from the report list. The "Selection from report list:" list displays the names of your Reports. This allows you to export just the records that were queried for a report. (For example, if a report entitled "Contract Employees" is designed to display all individuals whose badge type is "Contract" and you want to export those records for use in another database, select "Contract Employees" from the pick list. The EXPORT SELECTED RECORDS button is now enabled. Clicking it will export those records.

Create a report for each group of records you are likely to want to export.

Section 3.7

Badge Design

You arrive at IDLayout by clicking TOOLS➲LAYOUT ID BADGES.

IDLayout is the badge design module of ID Card Maker which includes a sample badge as a model. It is required that your images or graphics are "digital"-- they must be graphic image files stored on your hard drive. If you have a company logo or favorite image and want to incorporate it into your badge layout, scan the image and save it to disk. You may now incorporate it into the badge layout.

Though you can create badge designs from scratch, it is more likely you will be reproducing pre-approved badge layouts used by your organization. Either way, you will probably need to create a variety of badge designs reflecting various positions of the people in your organization. Color coding, for example, is one common feature distinguishing one type of badge from another. Special text or logos on a badge can reflect the range of "privileges" assigned to your employees. You may need to create multiple badges containing some common elements, as well as unique features. Each time you enter an individual into the database, you have an opportunity to assign him or her the badge-type appropriate to their position.

Text and graphic images used in the badge layout are called objects. All objects can be shrunk, stretched and enlarged by clicking once on the object to select it, and dragging its “handle” (any of the four, tiny black squares appearing at its corners). An object can be moved by clicking and dragging it to a new location (the pointer turns into a four-sided arrow). ID Card Maker also offers “multiple select” and “alignment” tools which align multiple objects to each other and to the card itself. ID Card Maker supports cut and paste, so when multiple badge layouts are open you may easily copy images or text from one badge design to another.

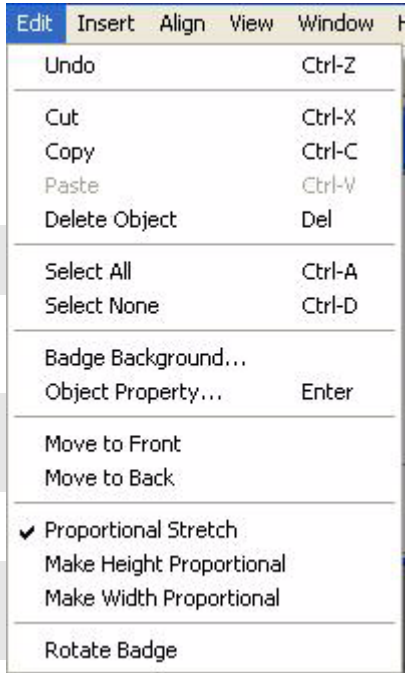
The following discussion provides an orientation to the layout commands available on IDLayout’s menu bar, and instructions for placing objects on the badge layout will be provided.

Menu Commands

The File menu

New	Creates a new badge layout.
Open	Opens an existing badge layout.
Close	Closes the currently active open badge layout.
Save	Saves a newly created or edited badge layout.
Save As...	Saves a copy of the existing badge layout with a different name.
Save to Archive	Similar to the way "WinZip" works, this saves the *.bdg badge layout file, plus any graphics used in the layout. By saving the entire file, you may send this archive to someone else by email, for example, so they may immediately use the badge design in their version of ID Card Maker.
Unpack Archive	If someone receives a badge archive, you may "unpack" it with this command.
Exit	Exits IDLayout.

The Edit menu



Undo	Returns an object to its state before the most recent action was taken.
Cut	Deletes an object from the layout and places it on the "clipboard" (the computer's temporary memory).
Copy	Places a copy of an object onto the "clipboard" so it may be "pasted" or used again, while the original object remains on the layout.
Paste	Inserts the contents of the clipboard onto the badge layout.
Delete Object	Deletes an object from the layout, not from the hard disk. (When an object is deleted, it is not placed on the clipboard.)

Select All	Selects all the objects on the badge.
Select None	Deselects all previously selected objects.
Badge Background	Opens the Badge Background dialog allowing you to choose between one- or two-sided badge designs, use a solid color or graphic image for the badge's background, and instruct ID Card Maker to send the data in the mag track fields to the printer for magnetic encoding (if your printer supports this).
Object Property	Opens the "Property of..." dialog allowing you to change the characteristics of the selected object (e.g., change its size, color, rotation, etc.). (Double-clicking or right-clicking an object, or pressing Enter when the object is selected, also activates this command.)
Move to Front	Brings a selected object to the front of the badge layout when multiple objects overlap. Text always remains in the foreground. (Background images created with the "Badge Background" command always remain in the background.)
Move to Back	Sends objects to the back of the badge layout when multiple objects overlap. Text always remains in the foreground. (Background images created with the "Badge Background" command always remain in the background.)
Proportional Stretch	To preserve an object's original ratio of height to width when shrinking or enlarging it, drag its "stretch handles" after selecting this option. If this option is "off," an object's width or height can be stretched out of proportion. Once the object has been distorted, it cannot be restored to its "original" height to width ratio unless it is deleted from the badge layout and re-inserted as a new object or the "Make Proportional..." commands (below) are used.
Make Height Proportional	Forces the object to decrease or increase in size, achieving the original ratio of height to width, based on the current width of the object.

Make Width Proportional	Forces the object to decrease or increase in size, achieving the original ratio of height to width, based on the current height of the object.
Rotate Badge	Allows you to rotate the badge and all its contents in 90° increments. Selecting this command repeatedly produces 90°, 180°, 270°, and back to 0° rotations.

The Insert menu

Portrait	Inserts the portraits captured from within ID Card Maker. Portraits are “dynamic” in that ID Card Maker inserts each individual’s portrait on their own badge. (Portrait is “grayed out”, or unavailable, if it is not selected in ID Setup.)
Signature	Inserts the signatures captured from within ID Card Maker. Signatures are “dynamic” in that ID Card Maker inserts each individual’s signature on their own badge. (Signature is “grayed out” if it is deselected in ID Setup.)
Fingerprint	Inserts the fingerprints captured from within ID Card Maker. Fingerprints are “dynamic” in that ID Card Maker inserts each individual’s fingerprint on their own badge. (Fingerprint is “grayed out” if it is deselected in ID Setup.)
Text	Inserts database text into the badge layout. When you select Text, a “pick list” of database fields and formulas appears from which you select the field you wish to insert on the badge layout. Text objects are dynamic in that ID Card Maker inserts the data in that field from each individual’s record onto their badge.
Image	Inserts a picture that is linked to a database text field. If an image you want to use (for example, a scanned logo) is named the same as the contents of a database field, the Insert/Image command inserts that scanned logo on every badge where that name appears in the specified field. For example, scan an image of California’s state symbol, name the image file “California.” Whenever an individual’s State field in the database contains the text “California,” the California state symbol appears on their badge.

Bar Code	Allows you to insert the database's bar code field. (Or you may choose any other field from a "pick list" of database fields.) A bar code object provides the ability to add required encoding characters at the beginning and ending of the text in the database's bar code field. Note: after inserting a bar code, it does not display as a "bar code" until you select a bar code typeface in the Properties of Bar Code dialog.
2-D Bar Code	Allows you to use Datastrip's 2D Superscript or the PDF417 bar code if you use 2D bar code readers. 2D bar codes allow more data than traditional bar codes. For example, Datastrip's 2D Superscript can encode as much as 2100 bytes of data, and incorporate images as well as text.
Static Text	Allows you to place text that is identical on all badges, such as a company name or address. Selecting this command brings up a window in which you type text exactly as you want it to appear on the badge.
Static Image	Allows you to insert an image or graphic, such as a company logo, that appears on every card.
Solid Box	Allows you to create a "border" or drop shadow behind text and image objects. Solid boxes may be dragged and re-sized, but default to being placed immediately behind an object.
Magnetic Track 1, 2, 3	Does not actually place a visible object on the badge layout, but instructs ID Card Maker to send the data contained within the magnetic track field(s) you select to your card printer, which encodes the data on the magnetic stripe when the card is printed.

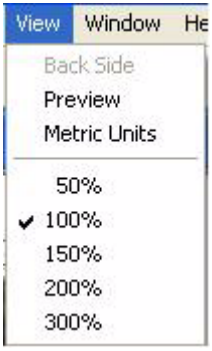
The Align menu

Left	Aligns multiple selected objects to the left-most object.
Right	Aligns multiple selected objects to the right-most object.
Top	Aligns multiple selected objects to the top-most object.
Bottom	Aligns multiple selected objects to the bottom-most object.
Center Horizontal	Aligns single and multiple objects to the horizontal center of the badge.
Center Vertical	Aligns single and multiple objects to the vertical center of the badge.
Align to Grid	Forces selected objects' top left corner to "snap to" the nearest grid point on the layout.

Size to Grid	Forces selected objects to increase or decrease in size to the grid point nearest the bottom right corner of the object.
Grid Settings	Allows you to set the size of the grid (from 2/100ths of an inch to one inch) and turn on "snap to grid" so objects always snap to a grid point when being moved. (See graphic next page.)

The View menu

(Note: "Back side" is only available if you chose the two-sided option in the Properties of Badge Background window.



Back side	Displays the back of a two-sided badge.
Preview	If you enabled "Preview in IDLayout" from ID Setup, selecting Preview will extract the data from a selected record and present it in the layout window so you may see exactly how the badge will appear in its final output. (See "ID Setup," page 44.)
Metric Units	Choose whether the unit of measurement is metric.
50%	Reduce the view of the badge to 50% actual size.
100%	View the badge at actual size. (Variations in monitor resolution-e.g., 800x600, 640x480-will affect how closely this reflects the "actual" size.)
150%	View the badge at 150% of actual size.
200%	View the badge at 200% of actual size.
300%	View the badge at 300% of actual size.

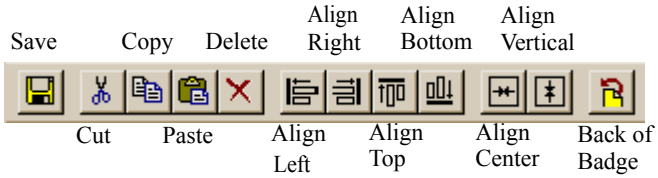
The Window menu

Cascade	Allows multiple badge layouts to “float” on top of each other.
Tile	Forces multiple badge layouts to appear in rows (no overlap).
Arrange Icons	Forces minimized badge layouts to arrange themselves at the bottom of the Badge Layout window.
Status Bar	Toggles the Status Bar at the bottom of the window on and off. The Status Bar displays the name of each badge object when selected.
	All open badge layouts are listed in the Window menu. You may quickly “set the focus” of a layout by selecting it from this menu.

The Help menu

The Help menu brings up the on-line help instructions and identifies the current version of this software.

In addition, a tool bar beneath the Badge Layout window’s menus offer quick access to the following commands:



Badge Objects

Each object is placed onto the badge using the Insert menu command. Once inserted onto the badge layout, objects may be "dragged" to any location, and stretched (re-sized) by dragging one of the four "handles" that appear at their corners when selected. Alternately, you may re-size objects using the following key-stroke shortcuts:

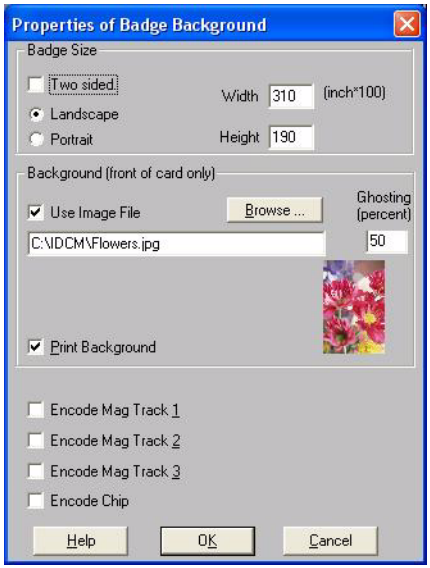
- Ctrl + any arrow key expands the object in the direction of the arrow.
- Ctrl + Shift + any arrow key shrinks the side of the object represented by the direction of the arrow.
- + on the numeric keypad expands the object on all four sides.
- – on the numeric keypad shrinks the object on all four sides.
- ← = the left side of the object.
- ↑ = the top of the object.
- → = the right side of the object.
- ↓ = the bottom of the object.
- Objects shrink or expand in increments of 1/100ths of an inch.

Each object is edited from within a "Properties of..." dialog by double or right clicking the object after it has been placed on the badge (or by selecting the object and pressing Enter or using the Edit menu's Object Property command). Different object types offer differing editing options.

Properties of Badge Background

Pull down the FILE menu to NEW to create a new badge layout. A Properties of Badge Background window appears. If your card printer supports double-sided printing, click the "two sided" box. Select either Portrait or Landscape for badge orientation. The Badge

Width and Badge Height values are supplied automatically by the card printer's printer driver (selected in ID Setup when you specified which card printer you are using).



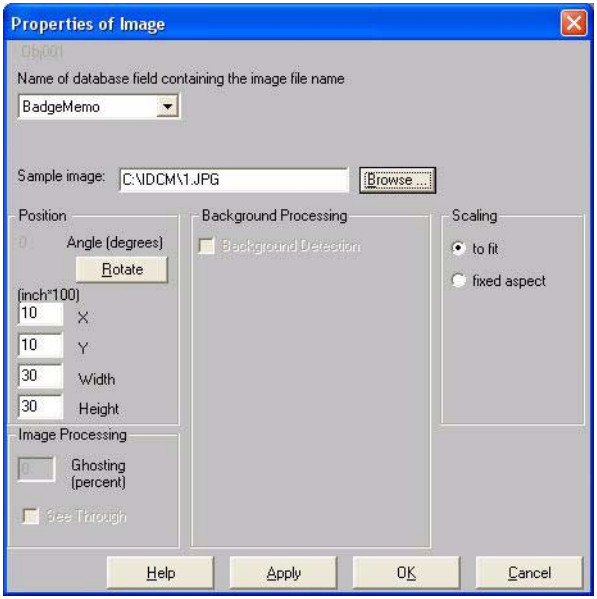
If you want to use a background image or background color, click either the USE IMAGE FILE or CHOOSE COLOR buttons. Checking USE IMAGE FILE makes a BROWSE button appear. Navigate to and select an image file to be used as the badge's background. When this option is selected, a Ghosting option also appears. Enter a number from 0-99 to "ghost" the image. A "0" applies no ghosting; a "99" applies complete ghosting (invisible). The CHOOSE COLOR button brings up a color selection window from which you may select from Windows' basic 48 colors, or click DEFINE CUSTOM COLORS to choose a custom color. (After creating a custom color, click ADD TO CUSTOM COLORS adding it to the custom colors bar, and then click that color on the custom colors bar to select it for use.) Check the PRINT BACKGROUND check box if you are *not* printing on pre-printed cards. (If you use pre-printed cards containing a background image, you may insert a copy of the graphic on the badge background allowing you to precisely place the badge objects; this option allows you to "see" the background without printing it.)

If your card printer supports magnetic encoding, click ENCODE MAGNETIC TRACK 1, 2, OR 3 (whichever tracks your card reader requires) instructing ID Card Maker to send data to the card printer for encoding. A pick list appears beside each mag track selected, allowing you to select the database field whose contents need to be encoded on the magnetic track. Ordinarily, you choose the corresponding magnetic track fields created in the Configuration area of ID Card Maker's tools. You may, however, select any other field for

encoding by selecting it in this pick list. You may also build custom “data strings” with the Expression Builder (see “Expression Builder” on page 114). If your printer supports Smart Chip encoding, select the database field containing the data that is to be encoded.

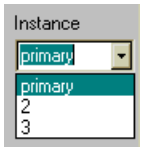
Image Properties

The “Properties of...” dialog is nearly identical for Portraits, Fingerprints, Signatures, Dynamic Images, Static Images and Solid Boxes. After inserting an image-type, double-clicking or right-clicking on the object brings up the “Properties of...” dialog.



To insert a portrait, fingerprint, signature, dynamic image, static image or solid box onto the badge layout (see “Solid Boxes” on page 111 for special instructions on inserting solid boxes), pull down the Insert menu and select a desired image type. The object appears in the badge layout window as an empty rectangle with its corresponding label. You may shrink or enlarge the image by dragging one of its handles. Double-click the object to bring up the “Properties of...” dialog.

If you enabled multiple image capture in IDServer Setup (e.g., 3 portraits, 10 fingerprints), the Properties of Portrait dialog will add the following option:



You may select from this pick list the specific image to be inserted on the badge.

In the "Properties of..." dialog, ID Card Maker automatically names each object as it is placed on the badge. The Sample Value field allows you to select an image file to temporarily appear in the badge layout window assisting you in better visualizing the badge layout. (Click the BROWSE button to navigate to a desired sample image.)

The Badge Position values indicate the location of the image on the badge layout. You may precisely adjust the position by entering values here, or simply drag the image to a new location using the mouse. (An object's movement may be constrained depending on the size of the grid and whether "snap to grid" was turned on.)

You may rotate the image in 90° increments by repeatedly clicking ROTATE.

You may "ghost" the image by entering a number (from 0 to 99) in the "Ghosting" field. A "0" applies no ghosting; a "99" applies complete ghosting (invisible). You may also make the image "transparent" (allowing background images to "bleed through") by checking See Through.

You may control the characteristics of image "re-sizing" by selecting either Scaling to fit or fixed aspect ratio.

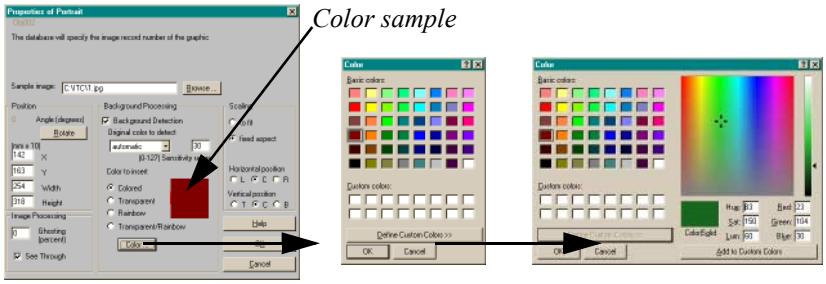
Background Detection: IDLayout provides the ability to detect a specific color or "range of color" within an image. Once "detected," that color can be made transparent, or replaced with a different color or even another image file. In order to implement background detection, you must indicate a color to detect (also called a "Key Color"), and a "range of sensitivity." Typically, background detection is used to remove the background color in a person's portrait. It may also be used to remove or substitute different colors in other image or graphic files.

The sensitivity range indicates how closely the image's background color must match the Key Color in order to be "detected." For example, many portraits are captured with a

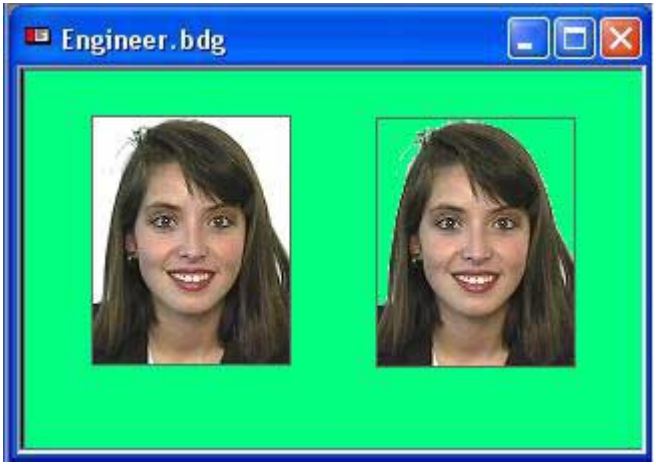
"white" background. But rarely is the background "pure white." Rather, it is a shade or variation of "white." If you set the Key Color to WHITE, IDLayout will attempt to remove all the color in the image that matches "pure white." If the actual background is not "pure white," the color substitution or transparency may not be completely successful. Therefore, the sensitivity range allows you to instruct IDLayout to be more or less "forgiving" in interpreting how close or far from "pure white" the background is. A smaller number means IDLayout should treat the "white" background as "closer to pure white" and only substitute or make transparent those pixels that more closely match "pure white." A larger number means that IDLayout should treat the background as "further away from pure white" and thereby substitute or make transparent more of the background. A value of 30 or less is generally suitable for portraits. Increasing the value for these images will tend to make the colors further away from white (like teeth or the whites of eyes) either transparent or color-substituted. On the other hand, graphic images generated by computer tend to have "purer" colors, allowing the use of lower sensitivity range values.

For portraits, it is recommended that you select "AUTOMATIC" instead of selecting a specific key color. When this is selected, IDLayout will sample the color at the upper left and upper right corners of the image object, average them, and use the result as the key color. It also protects colors within the face (e.g., white teeth and whites of eyes) from being altered. This generally produces excellent results. (Obviously, if your graphic is not a portrait, but has varied colors at the upper corners instead, this will offer poor results.)

To Change the Background Color of the Image (e.g., the backdrop behind the individual's head in a portrait): Select Background Detection. New options immediately appear. Click the COLORED radio button. A new COLOR button and rectangular "color sample" immediately appears. (The "color sample" shows the currently selected color.) Clicking the new COLOR button opens a Color Selection window in which you may select a new color. The color you select will now replace every instance of the color you specified as the Key Color.



To Eliminate the Background Portion of the Image: Select Background Detection. New options immediately appear. Click the TRANSPARENT radio button to make the background transparent, allowing images or badge background to display behind the portrait.



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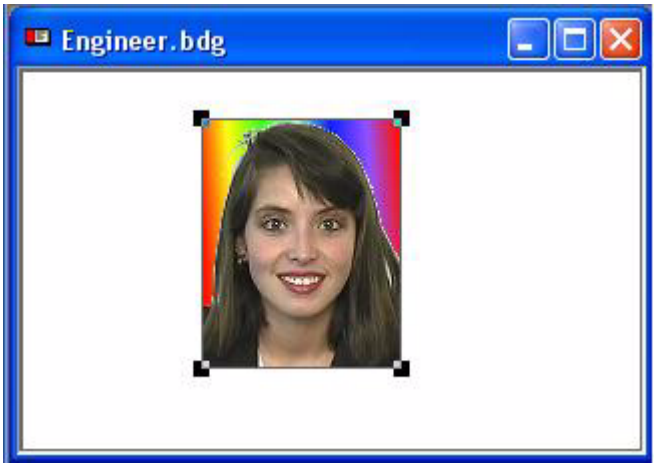
To Insert a "Rainbow" Pattern: Just as you may remove or change a colored portrait background (the color that appears behind the person's head), you may insert a "rainbow" pattern or any other graphic image to appear in the portrait background. After checking the BACKGROUND DETECTION check box, click the RAINBOW radio button. A BROWSE button appears allowing you to navigate the hard drive or network for an image file. ID Card Maker provides three sample "Rainbow" images located in a folder named

"Rainbows" installed in the IDCM directory (or elsewhere if you chose a different directory when you installed the program). Select either "rainbow1.jpg," "rainbow2.jpg," or "rainbow3.jpg." These colorful rainbows will now fill the portrait background.



To Insert a Transparent Rainbow Pattern: The "Transparent Rainbow" feature is designed for two-color images in which the background is white, such as a signature image file. After checking the BACKGROUND DETECTION check box, click the TRANSPARENT/RAINBOW radio button. A BROWSE button appears allowing you to navigate the hard drive or network for a background image file. The "transparent" part of this feature will make the white background transparent, allowing the card's background image to show through; the "rainbow" part of this feature changes the second color in the image (for example, the black signature) to the image you "browsed" for. You must set the "Original

color to detect" (from the pick list) to match the second color in the image file, e.g., "BLACK" for signatures.

Repeat these steps for the remaining images you want to incorporate into your badge design.

Solid Boxes

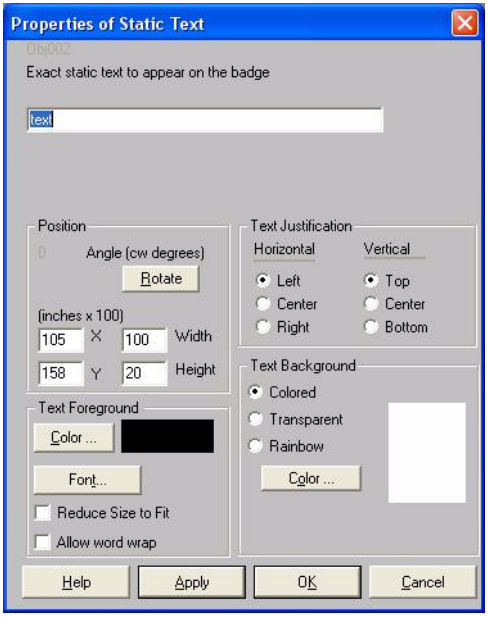
Though Solid Boxes may be inserted as simple colored rectangles, they are usually placed behind other objects to create the appearance of a border. Ordinarily, a Solid Box is inserted after a text or image object is selected. The Solid Box is placed immediately behind the selected object and is approximately one pixel larger. If a Solid Box is created first, the *next* object placed on the badge will be inserted *inside* the box and sized accordingly. The Solid Box may be enlarged and stretched as desired.

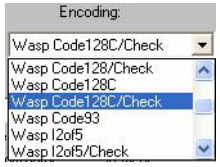
To enlarge all four sides of a Solid Box in one-pixel increments, press "+" (plus key on numeric keypad) while the Solid Box object is selected; to reduce the size, press "-" (minus key on numeric keypad). To enlarge or reduce the Solid Box on just one side, press Control- and an arrow key (the arrow key corresponds to moving the edge up, down or sideways). To move the Solid Box, press Shift and an arrow key.

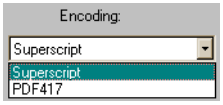
You may apply "ghosting" and "see through" to a Solid Box. (Select the Solid Box and choose "Object Property..." from the Edit menu, or double-left or right-click the Solid Box to open the "Properties..." dialog.)

Text and Bar Code Properties

Whether inserting static text (text that is identical on all cards), dynamic text (text that is extracted from a record's database field), or bar codes, the Properties of Text windows are nearly identical. (The Properties of... dialog for bar codes adds an "Encoding" pick list to select and insert the appropriate prefix and suffix to the selected bar code. Bar code readers require these "start" and "stop" characters to know when to start and stop encoding, as well as to provide additional encryption instructions. The Properties of...dialog for 2D bar codes offers a pick list to select either the 2D Superscript or PDF417 bar code.) (See "Bar Encoding" on page 121.) Double-clicking or right-clicking on a text object brings up the Properties of Text dialog from which you may change the text characteristics. ID Card Maker automatically names each object as it is placed on the badge. If the text object is dynamic, that is, linked to a database field, you may change the database field by selecting an alternate field from the pick list. You may type sample text in the Sample Value field to







Properties of 2D Bar Code adds this selection

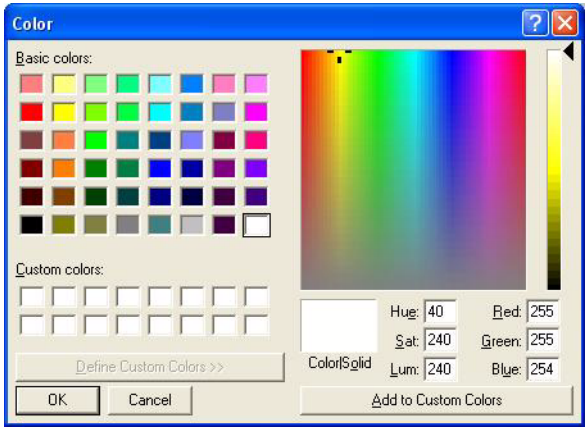
better visualize how the text will appear in the badge layout. If the text is static, you may edit the text in the Static Text field. In addition, an "Expression Builder" lets you combine database fields or parts of fields within a single text object. (When you select the equal sign (=) from the pick list of database fields in any Properties of Text dialog, an "ARROW BUTTON" appears to its right. Clicking the "ARROW BUTTON" opens the Expression Builder dialog. See "Expression Builder" on page 114.)

You may align the text vertically and horizontally within the object frame by clicking TEXT JUSTIFICATION. Allow long text to wrap to another line by checking Allow word wrap. Text wraps after a "space" between words.

You may rotate the text object in 90° increments by clicking ROTATE. Text objects retain their vertical and horizontal justification when rotated.

You may change the font characteristics (typeface, size, style, color, etc.) by clicking FONT and COLOR in the "Text Foreground" box. In addition, if you select a scalable True-Type font, you may force long text to fit within a specific object frame size by checking REDUCE TO FIT. (Caution: "REDUCE TO FIT" can shrink text to an unreadable 2 pts. if necessary to make text fit within a text object boundary.)

Note that text cannot be pure white (due to the card printers not printing white, which lets the card color show through. The numeric value for white in the custom color window is: Red = 255, Green = 255, and Blue = 255). To make text *appear* white, go to the custom colors window and change any one of the color numeric values to "254."



You may fill the background of the text object with a color or make the object frame transparent by selecting either Transparent or Colored in the Text Background box of this window.

Repeat these steps for the remaining text objects you want to incorporate into your badge design.

Expression Builder

The Expression Builder lets you create special text objects (which contain data from multiple database fields, plus literal text strings) and allow that data to be printed on a badge. With Expression Builder you can:

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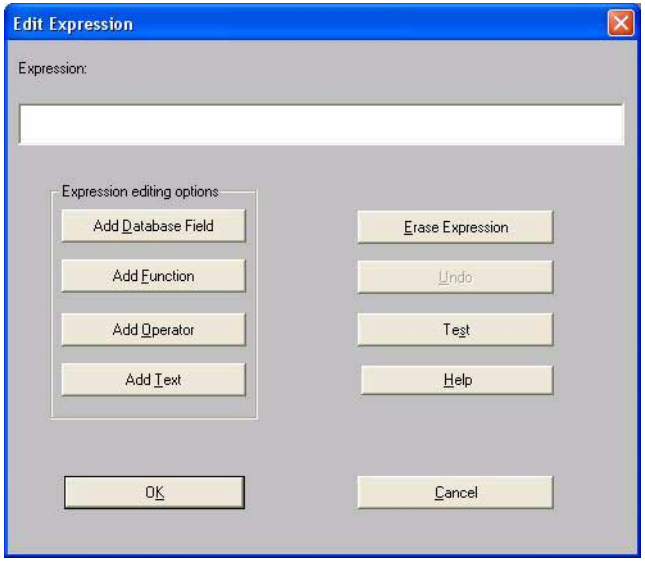
- Extract portions of data from within a database field
- Combine data with literal text
- Create a single badge object which contains data from numerous database fields
- Insert images into a 2D Superscript bar code
- Create “what if” arguments to insert text only if certain conditions apply
- more...

When you select the equal sign (=) from the pick list of database fields in any Properties of Text dialog, an “arrow button” appears to its right. Clicking the “ARROW BUTTON” opens the Expression Builder dialog.



An editable Expression field allows you to type “expressions” manually, but you may prefer to use the easy “ADD...” buttons instead. Unlike other applications, which limit you to

the number of expressions or custom “data strings” you may use, the Expression Builder allows you to create an unlimited number of specialized displays of your data.

Add Database Field

Add Database Field button

Click this button to present a list of database fields. When you select a field and click “OK,” it is inserted into the Expression field.

Add Function

Add Function button

Click this button to present a list of formatting functions. Note: when a function is inserted into the expression edit field, it is followed by parentheses. The parentheses may have none, one or two commas embedded within them. You must mouse-click inside the parentheses, before or after the appropriate commas, to insert either a database field name, operator, or literal text, depending on the function you are using. Refer to the table below for descriptions of the functions.

Command	Format	Example
FORMATL	FORMATL(,)	FORMATL ([EmployeeID], 0000000000)
	This argument "pads" the specified database field with the "mask" supplied after the comma. In this example,10 zeros is the "mask," meaning the employee ID field must have 10 characters; if the employee ID field contains less than 10 characters, zeros will be added to the right of the data until there are a total of 10 characters. If the employee ID is originally "12345," the example above would result in: "1234500000." 12345=actual data 0000000000="mask" 1234500000=final result	
FORMATR	FORMATR(,)	FORMATR ([telephone], (716)00000000)
	This argument "pads" the telephone database field with the "mask" supplied after the comma. The characters to the right of the comma is the "mask," meaning the telephone field must have 13 characters; if the telephone number only has 8 characters (e.g., 575-2456), the portion of the "mask" to the left of the number will be added. 575-2456=actual data (716)00000000="mask" (716)575-2456=final result	
IIF	IIF(, ,)	IIF(NickName <> "", NickName & " " & LastName, FirstName & " " & LastName)
	This "if" statement reads: IF the field "NickName" does not equal nothing, i.e., is not empty, THEN insert the contents of the NickName field PLUS a blank space PLUS the contents of the LastName field, OTHERWISE insert the contents of the FirstName field PLUS a blank space PLUS the contents of the LastName field. (See Appendix D for a detailed description of the IIF statement.)	
LCASE	LCASE( )	LCASE ([LastName])
	This argument reads: Convert the contents of the LastName field to lower case letters. If the last name is Wilson, the result is: wilson	
LEFT	LEFT(,)	LEFT ([LastName, 2)
	This argument reads: Get the first two letters from the left side of the contents of the LastName field. If the last name is Wilson, the result is: Wi.	
MID	MID(, ,)	MID ([lastname], 2, 3)

Command	Format	Example
	This argument reads: Beginning after the second letter, get the next three letters from the contents of the LastName field. If the last name is Wilson, the result is: lso	
REVERSE	REVERSE( )	Reverse ([LastName])
	This argument reads: Reverse the contents of the LastName field. If the last name is Wilson, the result is: nosliW.	
RIGHT	RIGHT(,)	RIGHT ([LastName], 2)
	This argument reads: Get the last two letters from the right side of the contents of the LastName field. If the last name is Wilson, the result is: on.	
TRIM	TRIM( )	TRIM ([LastName])
	This arguments reads: Remove all leading and trailing non-printing characters from the contents of the LastName field (e.g., spaces, tabs, returns, etc.). If a database editor inadvertently entered a "carriage return" after the last name, the TRIM command would remove it.	
UCASE	UCASE( )	UCASE ([LastName])
	This argument reads: Convert the contents of the LastName field to upper case letters. If the last name is Wilson, the result is: WILSON	

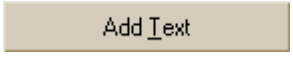
Add Operator button

Click this button to get a choice of operators. Most operators produce numeric results.

Operator	Explanation
%	The % is the mod operator; it returns the remainder of a division. For example, 25 % 2 results in: 1; 10 % 3 results in: 1.
&	The ampersand is used to concatenate values. For example, [lastname] & ", " & [firstname] results in: Wilson, Jerry.
,	The comma separates statements. Note the commas in the following expression: IIF (argument, result1, result2).
/	The forward slash divides numbers. For example, 100 / 2 results in: 50
+	The plus sign adds numbers. For example, 100 + 50 results in: 150

Operator	Explanation
<	The “less than” sign is a Boolean function returning a “true (1)” or “false (0)” value. Example: [Printcount] < “4” results in a True or “1” if the record’s badge was printed less than four times.” Use this in an “IIF” statement. For example: IIF ([Printcount] < “4”, “”, “Needs to be updated.”) This example would do nothing if the badge was printed less than four times; otherwise, the text “Needs to be updated.” would be displayed on the badge.
<>	This means “not equal to” and is a Boolean function returning a “true (1)” or “false (0)”. Use this in an “IIF” statement. For example: IIF ([Middle] <> “”, [Middle] & “ ” & [LastName], [FirstName] & “ ” & [Last-Name]) This example says, “If the middle name equals nothing (two quotes with nothing between them represents “nothing”), that is, if the middle name field contains something, then add the middle name and last name. Otherwise, if the middle name field is empty, use the first name with last name.
=	This means “equal to.” For example, [Department] = “Engineering” Use this in an “IIF” statement. For example: IIF ([Department] = “Engineering”, “Engineer”, “”) This example says, “If the department field contains the text “Engineering,” then insert the word “Engineer” on the badge. Otherwise, don’t do anything.
>	The “greater than” sign is a Boolean function returning a “true (1)” or “false (0)” value. For example, [Printcount] > “4” results in a True or “1” if the record’s badge was printed more than four times.” Use this in an “IIF” statement: IIF ([Printcount] > “4”, “”, “Needs to be checked.”) This example would do nothing if the badge was printed more than four times; otherwise, the text “Needs to be checked.” would be displayed on the badge.

Operator	Explanation
AND	Use AND when you want a query to satisfy more than one argument. Individual arguments must be enclosed within parentheses. The AND operator is used with IIF statements. For example: IIF (([Clearance] = “5”) AND ([Department] = “Security”), “Access Permitted”, “”) This states, “if the individual has a security clearance level of “5” and also is part of the “Security” department, then print the words “Access Permitted” on the badge. Otherwise, don’t print anything.”
OR	Use OR when you want a query to satisfy only one part of an argument. Individual arguments must be enclosed within parentheses. The OR operator is used with IIF statements. For example: IIF (([Clearance] = “5”) OR ([Department] = “Security”), “Access Permitted”, “”) This states, “if the individual has a security clearance level of “5” or is part of the “Security” department, then print the words “Access Permitted” on the badge. Otherwise, don’t print anything.”

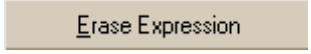


Add Text button

The ADD TEXT button allows you to insert strings of literal text into an expression.

Test button

The TEST button will verify the syntax of the current expression. If the expression “passes,” the Test window will display the result of the expression.



Erase Expression button

The ERASE EXPRESSION button clears the current expression.

Undo button

The UNDO button removes the last action taken.

When you finish designing your badge, pull down the FILE menu to SAVE or click SAVE on the tool bar to save your badge layout. Give the badge a descriptive name and save it to the

directory you specified in the "Server data path" field in ID Setup. ID Card Maker automatically adds a ".bdg" file extension to the file name. When you finish designing all your badges, consider returning to Configuration Management (ID Card Maker "home"➲Tools➲Configuration) to set your default badge layout.

Using the "Insert Image" Command

The Insert Image command is a particularly powerful feature in ID badge layouts. It is useful when different types of employees, students, or visitors etc. require specific images or logos on their badges. Consider a university setting: you may want all badges to use the same badge layout, but have all faculty badges contain an image of the university crest; all students' badges to have an image of a book; and all support staff to have an image of the school building. Or consider an airport's ID badge: using a single badge layout to identify the airport, all pilots' badges must include a logo of the airline for which they fly. Instead of creating various badge layouts, one for each airline and containing a static image of that company, use only one badge layout for pilots, but which will automatically insert the correct airline logo on their badge. In the example of the airport scenario, here is how this is accomplished:

1. In the Personal Data window of ID Card Maker, type in the name of the airline for each pilot in the Company Name field. *Note: Use drop-downs in the form with the correct spelling to ensure matches*.
2. Scan images of each of the airlines' company logos and save each image with the exact name being used in the Company Name field in the database. (For example, if you typed "Delta" in the Company Name field in the database, save your scanned image of Delta's logo as "Delta.") The file extension can be any graphic that is recognized by IDServer. Because ID Card Maker only looks for badge layout images and designs in the directory specified in the "Server data path" in ID Setup, save these logos to that directory. (If you forget the "path," go to Tools➲Configuration Management: the "Server data path" is identified in the Configuration Management window.)
3. In Badge Layout, pull down the Insert menu and select "Image." In the resulting window, select the database field on which you are basing the association between text and graphic images. (In the example above, select the field "Company.") That "object" now appears in the badge layout window where you may re-size, reposition or otherwise edit it as you would any other layout object.

4. From now on, if the name of your image file matches the name entered in the text field in the database, ID Card Maker will display that image into the individual's badge.

Bar Encoding

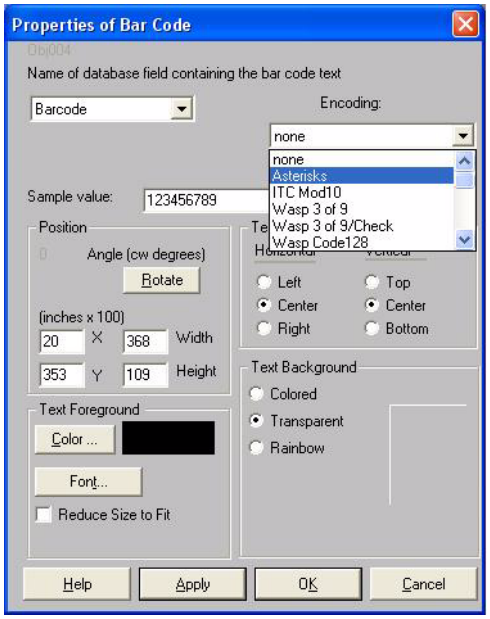
There are some questions that must be answered before you insert a bar code into a badge design.

1. Is this a swipe, "infrared", or a visible reader?
   - Infrared requires K panel black and can overlay other objects except black text.
   - Visible requires a clean white quiet zone around the barcode to be readable.
2. What is the bar code "type" font of the reader?
   - Wasp 3 of 9 with check digit.
   - Codabar or Mod 10.
3. Are there any site codes or special characters required?
4. How long is the information. (This is required so that you can get the right sample for space considerations. You can *not* shrink to fit a barcode.)
5. Is the orientation portrait or landscape?

Traditional "1D" bar code fonts (displayed as a series of black "bars" of varying thickness) vary widely in their implementation. For example, some bar code fonts will only allow the use of numbers (that is, you are not allowed to use letters in a bar code field); some will only allow the use of uppercase letters (if you insert a lowercase letter, the "translation" into the bar code font will fail). The Code 3 of 9 bar code font included with ID Card Maker allows alphanumeric entry, and will automatically convert data entered in

lower case letters to the required upper case format. However, ensure that the data you enter into the database field (used for bar coding) follows the "rules" for the bar code font you will use.

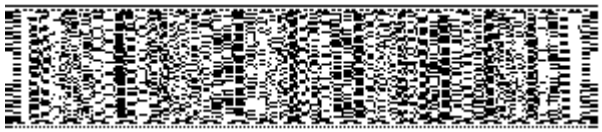
Data converted to a bar code font may be "encoded" in a variety of ways, depending on the individual font. Some encoding is simply a matter of providing a "start" and "stop" character to instruct the bar code reader when to begin and end reading actual data. Other kinds of encoding involve complex algorithms to compress text and numbers, and embed error correction mechanisms into the actual "reading" of data.



ID Card Maker provides automatic encoding for Code 3 of 9, the Wasp and Rivers Edge bar code families. (Use "Asterisks" for the Code 3 of 9 font.) First, select the correct encoding option from the pick list in the Properties of Bar Code dialog. The correct prefix and suffix will now be inserted automatically. (If the bar code font you are using does not appear in the pick list of encoding options, return to the Configuration Management window where you can manually enter the correct prefix and suffix as text strings in the Bar Code expression.) Next, click the FONT button to select your bar code font.

2D bar codes are noted for their ability to store very large amounts of data (relative to traditional 1D bar codes). For example, Datastrip's 2D Superscript can hold the entire contents of Abraham Lincoln's Gettysburg Address and still have room left over for more

data. It can also store actual images, such as portraits and/or fingerprints. Since it can hold all the data in a single database record, the 2D Superscript can be thought of as a static snapshot of a database record-a "portable" database, if you will. In addition, 2D Superscript offers tremendous built—in error correction—up to 50% of the bar code may be damaged due to wear, yet the data can still be "read."



When you insert a 2D Bar Code on a badge layout, the Properties of 2D Bar Code dialog allows you to select a database field whose contents you want to be encoded in the 2D Bar Code. You may choose the database's Bar Code field (which allows the concatenation of multiple fields and strings of literal text) or any other field in the database. However, since the Datastrip 2D Superscript bar code can encode up to 2100 bytes of data, including images, you will probably want to use the Expression Builder to encode the contents of numerous database fields and text strings, as well as images. (If you are using Datastrip's 2D Superscript bar code and reader, please visit www.datastrip.com for special instructions on implementing their bar code within IDLayout.)

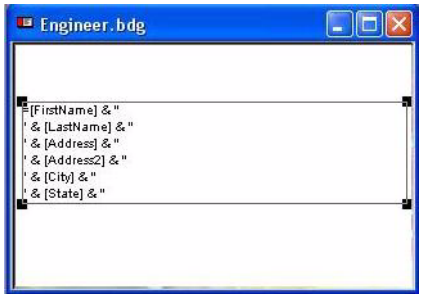
When implemented in IDLayout, the Datastrip Superscript requires each text string, database field or image object to be placed on a separate "line." If the data is not placed on its own "line," the Datastrip 2D bar code reader may not correctly read the data encoded in it. These "virtual lines" are created in Expression Builder by separating each text string or database field with & "\n" &. (The ampersand (&) is an instruction character telling Expression Builder to "add what follows;" backslash-n (\n) is the keystroke command for "carriage return" and as with any text string, must be enclosed within quotation marks; the trailing ampersand allows the concatenation of the next value to be encoded.)

Therefore, to create your 2D Superscript bar code in Expression Builder, use the ADD DATABASE FIELD button to add a database field. After each database field, use the ADD TEXT button to add the backslash-n required to create a "virtual line." (If you use the ADD TEXT button to type the backslash-n, Expression Builder automatically encloses it within quotation marks.) A sample expression for use with 2D Superscript might look like the following:

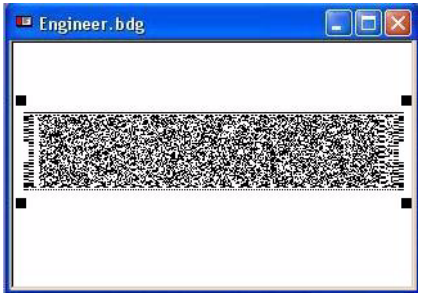
[LastName] & "\n" & [FirstName] & "\n" & [SsNo] & "\n" & "portrait " & [imageID] & "\n" & "fingerprint " & [imageID]

NOTE: To insert images, you must manually type the name of the image (e.g., "portrait," "fingerprint," "signature") followed by a space character (spacebar); enclose the image name, including the trailing space, within quotation marks; type ampersand (&) followed by the database field "imageID"; as with all database fields in Expression Builder, fields must be enclosed within braces ([ ]). The '"portrait " & [imageID]' must appear on its own "virtual line." Images are automatically compressed by Superscript; color images are converted to black and white in order to conserve space.

The resulting 2D bar code object would appear in the badge layout as follows:



If the badge is previewed (View menu➲Preview), the object would appear like this:



If your results are not as you expect, verify:

- each field or text string is separated by an ampersand (&);
- text strings begin and end with quotation marks (" ");
- you have included a space after the words "portrait," "signature," and "fingerprint;"
- you have re-sized the 2D bar code object on the badge (if you did not "stretch" the object large enough, the 2D bar code looks like a solid gray rectangle).

Magnetic and Smart Chip Encoding

Magnetic encoding for card printers that support writing to a magnetic strip requires three areas of "setup": 1) the "prefix" and "suffix" must be configured (described in "Encoding" on page 56), 2) there must be data (text) in the "Mag Track" field(s) (described in "Encoding Formulas" on page 35), and 3) the mag track must be inserted onto the badge layout (described below).

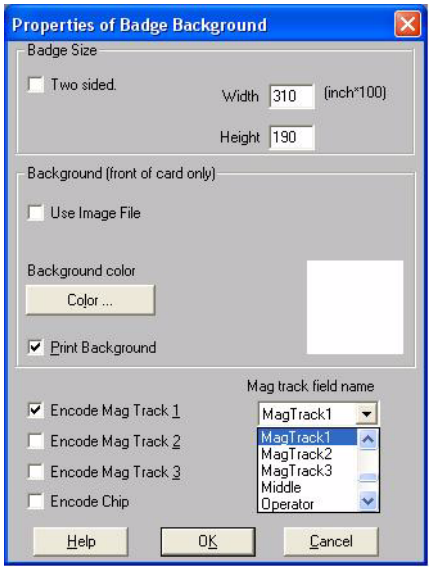
"Smart Card" encoding for card printers that support sending data to a chip encoder requires two areas of "setup": 1) the encoding method must be designated (described in "Encoding" on page 56), and 2) you must select a database field containing the data you want encoded on the chip (described below).

Magnetic Tracks in Badge Layout

You have already set your printer's prefixes and suffixes, and created the data strings in the mag track fields. Now you must insert the magnetic track fields onto the badge layout. (Note: some card readers may only use data in track two, where other readers will look for data in all three tracks. Refer to your access control device's documentation to determine which tracks are used.)

You may add magnetic encoding in two ways. 1) Pull down the Insert menu and select Mag Track 1, Mag Track 2, or Mag Track 3. An alert window tells you that ID Card Maker has inserted the contents of your magnetic track field (created in the Configuration window) for encoding. A "check" beside the name in this menu indicates that that track is "placed" in the badge layout. 2) Or pull down the Edit menu and select Edit Background. A Properties of Badge Background dialog appears. At the bottom of this dialog window are check boxes for "Encode Track 1," "Encode Track 2," and "Encode Track 3." Place a check in any of the tracks your card reader uses. A corresponding pick list of database fields now appears beside each check box. For each of the tracks you use, scroll through the list and select the corresponding mag track 1, 2, or 3 fields. The card printer will now encode the contents of your customized mag track fields. The magnetic tracks will not

appear on the badge layout, but ID Card Maker will send the information to the printer whenever the card with that layout is printed.



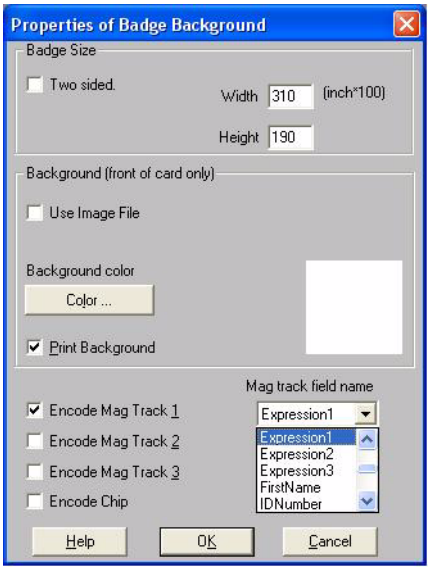
In some cases you may wish to select an alternate database field for magnetic encoding than what you specified in the Encoding Formulas section in the Configuration window. This is easily accomplished in Badge Layout. With the badge layout open, pull down the Edit menu and select Edit Background. In the Properties of Badge Background dialog, click the MAG TRACK check box you wish to change. In the corresponding pick list of database fields, select the new field you wish to have encoded.

Chip Encoding

If your printer supports encoding "Smart Cards," open the Properties of Badge Background dialog. (Either pull down the Edit menu and select "Badge background..." or left double-click an empty area of the badge layout.)

Place a check in the ENCODE CHIP check box. A list box appears in which you select the database field containing the data you want to encode on the Smart Card. Though you may use any field in the database, you may want to combine data from more than one field.

Therefore, “build” your data string using one of the “expression” formulas in the Configuration window. (See “Encoding Formulas” on page 35.)

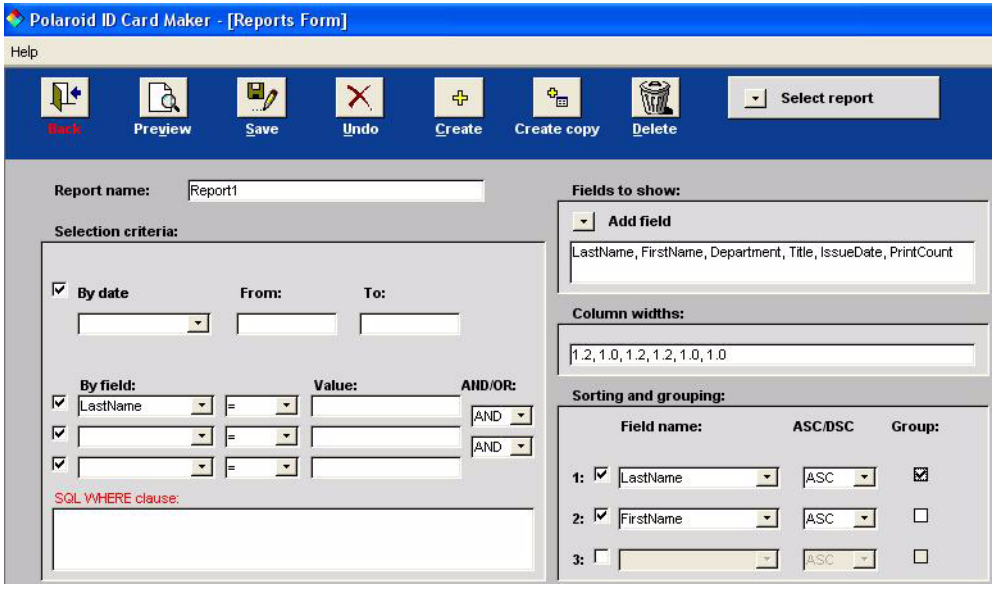


Section 3.8

Reports

To access the Reports window, click TOOLS➲REPORTS.

The Reports window displays a variety of buttons:



PREVIEW	After entering your report criteria, clicking PREVIEW displays a preview of the report. You may print your report from the Preview window.
SAVE	If you created or edited a report, clicking SAVE saves your changes.
UNDO	Clicking UNDO removes the last action taken in the Report window.
CREATE	Click CREATE to create a new report.
CREATE COPY	Click CREATE COPY to create a copy of a report.
DELETE	Click DELETE to delete the currently open report. (The open report is identified in the Report Name field.)
SELECT REPORT	Click the down arrow of SELECT REPORT to display a list of all saved reports. The selected report appears in the Report window.

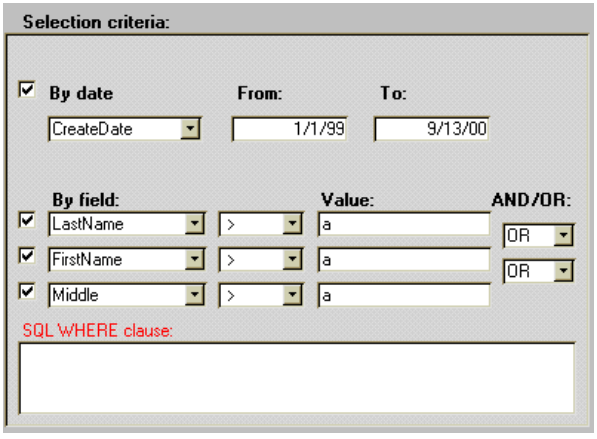
Creating a report requires three steps:

1. Specifying the query or search criteria for the records for which you want to view or print a report (if you leave this blank you will get all active records);
2. Specifying the database fields you want displayed in the final report; and
3. Specifying the Sort order of the final report.

Three areas of the Reports window allow you to customize these options.

Search Criteria

Enter your search criteria in the box on the left side of this window. If you want to use a date as a search parameter, place a check in the BY DATE box. You can use date parameters as the sole criteria for your search, or in conjunction with other search parameters. (Or elect not to use a date parameter in your search by deselecting the BY DATE check box.) When you check the BY DATE box, the date fields become active. Select a date field from the pick list of database date fields which you want to use as the basis for your search, e.g., birth date, print date, expiration date, etc. In the FROM and TO fields, enter a starting and ending date for your search. You may enter the dates alphanumerically—that is, either as numbers (7/4/1997) or as text (July 4, 1997). You may even abbreviate the names of months (Feb 4, 1997). Double-clicking in a date field automatically enters the current (today's) date. If you set the Regional control panel's Short date style to MM/DD/YYYY, use 4-digit year dates .



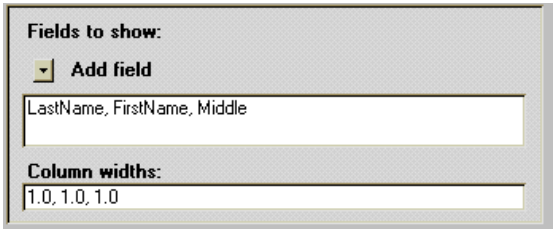
Use the options under BY FIELD section to add search criteria. Place a "check" in the small gray box to the left of the FIELD pick list to make field criteria available. (Each time you click in an empty check box, another check box appears below. Clicking on the subsequent box(es) allows the use of up to three fields. When you add a second or third field, an AND/OR selection box appears. You may select either "And" or "Or" to specify whether the query should match *any part* or *all* of the search criteria.) With the FIELD box active, click on its pick list to select a database field on which to create search parameters. Click the down arrow of the OPERATOR pick list to select a Boolean operator. Last, enter a value in the VALUE box. *(Note: unlike the opening Search window where you were able to enter only a few characters in a field on which to search, you must type the field's data in its*

entirety. In a text field, enter the complete word or words for which you are searching; in a number field, enter the exact number, etc. For example, in the Search window, you can find all the records belonging to the Engineer department by typing "eng" in the Department field. To find all the "Engineer" records in the Report window, you must enter "engineer.")

You can enter more complex "Where" statements in the "SQL Where" box using SQL expressions. (Refer to Appendix C for examples of SQL statements.)

Fields to Show in Report

On the right side of the Reports window, the FIELDS TO SHOW section provides an ADD FIELD pick list to select any database fields you want to view in your report. ID Card Maker places your selected fields in the small text box below. Each time you select a field for output, it is appended to the end of the list. If you want to rearrange the order in which the fields appear on the report, use cut and paste commands in this window.

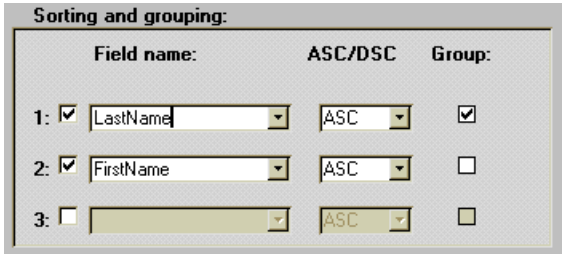


Column Widths

The data in a report is displayed in columns and rows. Rows correspond to individual records; columns correspond to the various database fields. You may specify the width of each "column" by entering a number (inches) in the COLUMN WIDTHS field. (Separate each number by a comma; specify column widths in the order they appear in the FIELDS TO SHOW field. For example, to make the First and Last names display in one inch columns, but have the Address display in a 2.5 inch column, enter: 1,1,2.5.)

Sort Order

Create a sort order by selecting a field for primary and secondary sort, and select whether the sort is in ascending or descending order. To view the results alphabetically by last name, place a check in the PRIMARY SORT check box, and select LastName in the list of database fields. In addition to simple sorting, you may create "sub-summary" sorts by selecting the GROUP RECORDS check box below the PRIMARY SORT or SECONDARY SORT fields. "Grouping" groups together all the records with identical values. For example, if you choose the "Department" field for sorting and grouping, and your database contains "Engineer," "Management," "Maintenance," and "Accounting" entries, all the records in the Engineering department will be grouped together, all the records in the Management department will be grouped together, and so on. You may sort the records within the groups by selecting an additional field for SECONDARY SORTING.



Tip: When grouping, insert the field to be used for grouping at the beginning of the list of fields displayed for output.

Click SAVE to save your report. Your saved reports appear in the SELECT REPORT pick list in this window, the EXPORT SELECTED RECORDS pick list in the Tools window, and the SET SQL FROM REPORT LIST on the "home page."

Preview and Print Reports

To preview and print your reports, click PREVIEW. The report appears in a preview window. (The mouse turns into a "magnifying glass;" click the mouse anywhere in the window to enlarge or reduce the report.) To print the report, pull down the FILE menu and select PRINT. Select PRINT SETUP from the FILE menu to select additional printing options. Select OUTPUT TO... to save a copy of the report to an external source. To close the preview window, pull down the FILE menu and select CLOSE.

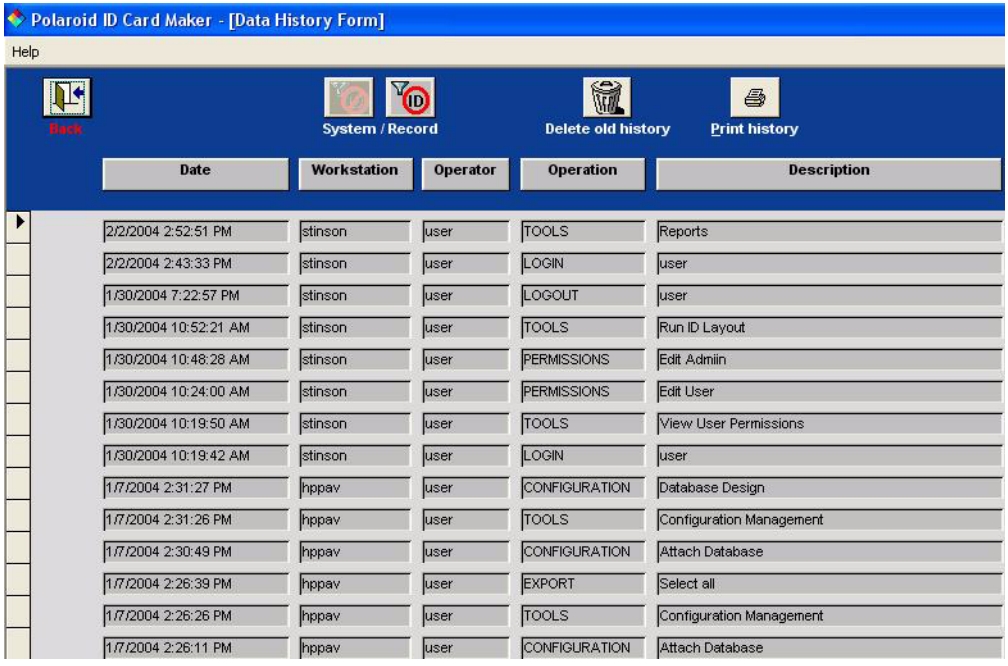
NOTE: The Report defaults to Windows' default printer. If you set a PVC card printer as your Windows default, the report will try to display (preview) in a window the size of your PVC card. The actual data may be distorted or not appear at all in the preview window. To correct this, pull down the FILE *menu to* PRINT SETUP. *On the "Page" tab of this dialog, select a paper printer. The report will now display correctly.*

Section 3.9

Data History

You arrive at the History window by clicking TOOLS➲DATA HISTORY.

ID Card Maker provides the ability to track changes made to specific records by clicking a HISTORY button in the Personal Data window. This shows "badge history" and "record events." ID Card Maker also creates a log of "application events" such as logons and logouts, and which tools a user has accessed, etc. To view the "application events" history, click HISTORY in the Tools window. A History window appears.



Date	Workstation	Operator	Operation	Description
2/2/2004 2:52:51 PM	stinson	user	TOOLS	Reports
2/2/2004 2:43:33 PM	stinson	user	LOGIN	user
1/30/2004 7:22:57 PM	stinson	user	LOGOUT	user
1/30/2004 10:52:21 AM	stinson	user	TOOLS	Run ID Layout
1/30/2004 10:48:28 AM	stinson	user	PERMISSIONS	Edit Admiin
1/30/2004 10:24:00 AM	stinson	user	PERMISSIONS	Edit User
1/30/2004 10:19:50 AM	stinson	user	TOOLS	View User Permissions
1/30/2004 10:19:42 AM	stinson	user	LOGIN	user
1/7/2004 2:31:27 PM	hppav	user	CONFIGURATION	Database Design
1/7/2004 2:31:26 PM	hppav	user	TOOLS	Configuration Management
1/7/2004 2:30:49 PM	hppav	user	CONFIGURATION	Attach Database
1/7/2004 2:26:39 PM	hppav	user	EXPORT	Select all
1/7/2004 2:26:26 PM	hppav	user	TOOLS	Configuration Management
1/7/2004 2:26:11 PM	hppav	user	CONFIGURATION	Attach Database

There are two categories of buttons at the top of the History window: *Activity* buttons and *Column* heading buttons.

Activity buttons:

 BACK	The BACK button returns you to the Tools window.
 RECORD SYSTEM	The SYSTEM/RECORD buttons toggle between viewing "record events" and "system events." The buttons are distinguished by a "show ID" and "don't show ID" symbol. The "ID" refers to the ID number of individual database records. Clicking RECORD displays a history of every change made to every database record. Clicking SYSTEM displays a history of just the application events.
 DELETE OLD HISTORY	The DELETE OLD HISTORY button allows you to delete a range of "history" records older than a record you specify. NOTE: this operation deletes BOTH "record event" history and "system event" history.
 PRINT HISTORY	The PRINT HISTORY button captures a screen shot of the entire history window and immediately prints it to your default sheet printer.

Column heading buttons:

Clicking the column heading buttons sorts the records below in ascending and descending order. To view the history records sorted by date, click the DATE button; to view the records sorted by workstation, click the WORKSTATION button. Clicking a button a second time reverses the sort order.

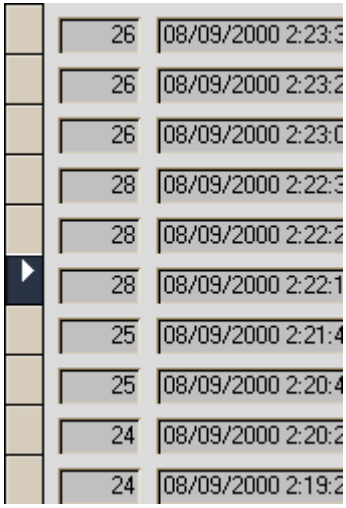
 ID	The ID column only appears if you clicked the RECORD button. The ID number corresponds to the Identifier number in the Persons Found window located immediately below the orange heading "Record History."
 DATE	The Date column records the date and time an event occurred.
 WORKSTATION	The Workstation column records the name of the workstation at which an event occurred.
 OPERATOR	The Operator column records the logon name of the user who performed an action.
 OPERATION	The Operation column records the area of the program accessed or the action performed in a record.
 DESCRIPTION	The Description column records a more detailed description of the event or action if applicable.

Deleting History Records:

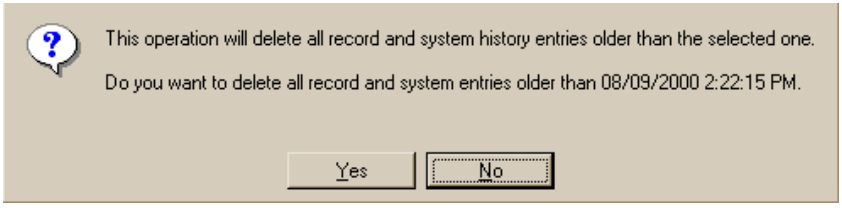
If your history "log" has grown old and long, you may wish to delete unneeded records. The deletion of records is based upon records' dates older than a record you select. To delete records, first select a record whose date comes before those you wish to delete.

(Select a record by clicking once in the left margin; a “record selector”—triangle—appears in the margin.)

Record selection triangle



Click DELETE OLD RECORDS. A dialog appears asking you to confirm the deletion. Click YES. All records older than the one you selected will be deleted.


This operation will delete all record and system history entries older than the selected one.
Do you want to delete all record and system entries older than 08/09/2000 2:22:15 PM.
Yes
No

Printing History:

You may wish to print your history for a variety of reasons. Simply click the PRINT HISTORY button. Screen shots of your History window will immediately print through your default printer.

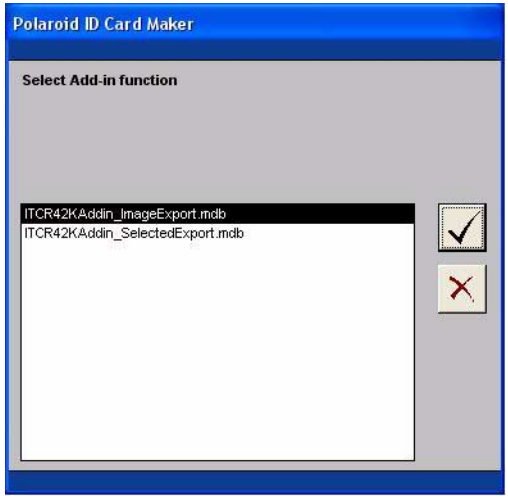
Section 3.10

Add-ins

You arrive at the “Add-ins” components by clicking Tools➲Add-ins.

Add-ins are automatically included in the higher-level products, and may be purchased separately in some lower version products. As new Add-ins become available, they may be purchased separately, as well.

When you click the Add-ins button, a Select Add-in window opens.



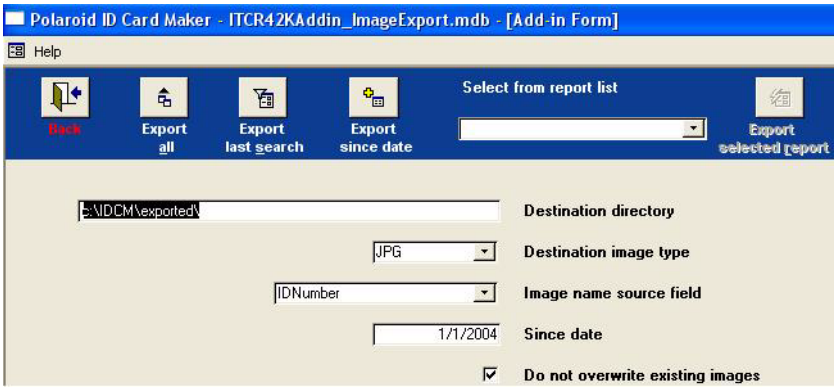
Two Add-ins are available:

- Image Export
- Select Export

Selecting an Add-in and clicking the ✓ button launches the Add-in.

Image Export

When you select Image Export in the Add-in dialog, the Image Export window opens.



Export all

The Export all button will export all images that have been captured.

Export last search

The Export last search button "remembers" the last query you performed and will export the images for that "found set" of records.

Export since date	The Export since date button will export the images for all records that have been modified (data edits, image capture, badge print, etc.) since the date you specify in the "Since date" text field.
Export selected report	The Export selected report button will export the images for records that are "found" using the Report query. Select the Report from the Select from report pick list. (This button is disabled until a Report is selected.)

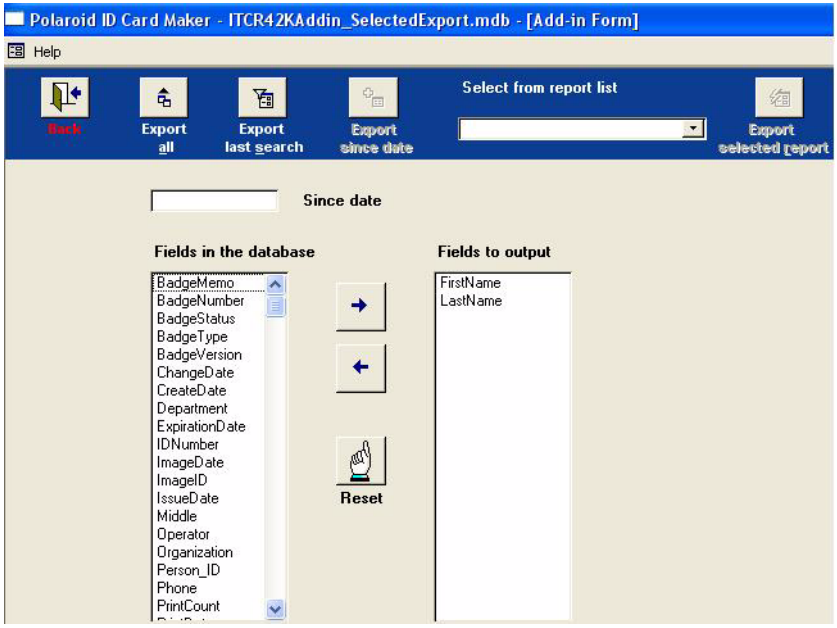
Below the buttons are additional options:

Destination Directory	Enter the path to the directory where you want the exported images to be saved. The path and folder must already exist; ID Card Maker will not create the folder for you.
Destination image type	Select from the pick list the image file format you want the images saved as.
Image name source field	Select the database field that stores the name of each individual's image. ID Card Maker uses the ImageID field to record each image's "name."
Since date	Enter a date in this field. All images whose records were modified on or after this date are exported.
Do not overwrite existing images	Check this box if you do not want ID Card Maker to over-write images if they already exist in the destination directory.

Selected Export

When you choose Select Export from the Add-ins window, the Selected Export window opens. In contrast to the Export button in the Tools window which exports ALL the data

in the database, the Selected Export Add-in allows you to export the data from select database fields for a group of records.



Export all

The Export all button will export data from all records in the database.

Export last search

The Export last search button "remembers" the last query you performed and will export data for that "found set" of records.

Export since date

The Export since date button will export data for all records that have been modified (data edits, image capture, badge print, etc.) since the date you specify in the "Since date" text field.

Export selected report

The Export selected report button will export data for records that are "found" using the Report query. Select the Report from the Select from report pick list. (This button is disabled until a Report is selected.)

Below the buttons are additional options.

A Since date field allows you to enter a date. Only data in records that have been modified on or after the date you enter here will be exported.

Two scrolling lists display Fields in the database and Fields to output. The Fields in the database shows every field in the database. Double-clicking a field name (or single-clicking and pressing the right arrow button ( ) moves it to the Fields to output list. Only data from the fields listed in the Fields to output list will be exported.

Clicking the Reset button ( ) clears all fields in the Fields to output list.

Section 3.11

Repairing and Compacting

You repair and compact your database by clicking Windows' START button➲ID CARD MAKER➲REPAIR ID CARD MAKER APP and REPAIR ID CARD MAKER DAT.

Data in your database may become corrupted from time to time for a variety of reasons:

- power outage
- hardware problems
- corrupted system files
- other factors

In addition, repeatedly editing a database (such as changing personnel information or creating new records) causes the database to save or write these changes to disk inefficiently. Periodically, it is useful to "compact" the database by reclaiming unused disk space. ID Card Maker includes Repair and Compact utilities to address these issues.

The REPAIR ID CARD MAKER APP program repairs and compresses the non-variable application data; the REPAIR ID CARD MAKER DAT program repairs and compresses the variable data.

Repair the application: Select REPAIR ID CARD MAKER APP. ID Card Maker immediately begins repairing the application. A "progress bar" at the bottom of the window shows that "repairs" are being performed. After a few seconds, a window appears informing you that the application has been successfully repaired. Click OK in that information window to proceed.

Another “progress bar” appears showing you that the application is being compacted. When completed, you are returned to the Windows desktop.

Repair the data: Select REPAIR ID CARD MAKER DAT. ID Card Maker immediately begins repairing the database. A “progress bar” at the bottom of the window shows that “repairs” are being performed. After a few seconds, a window appears informing you that the database has been successfully repaired. Click OK in that information window to proceed. Another “progress bar” appears showing you that the database is being compacted. When completed, you are returned to the Windows desktop.

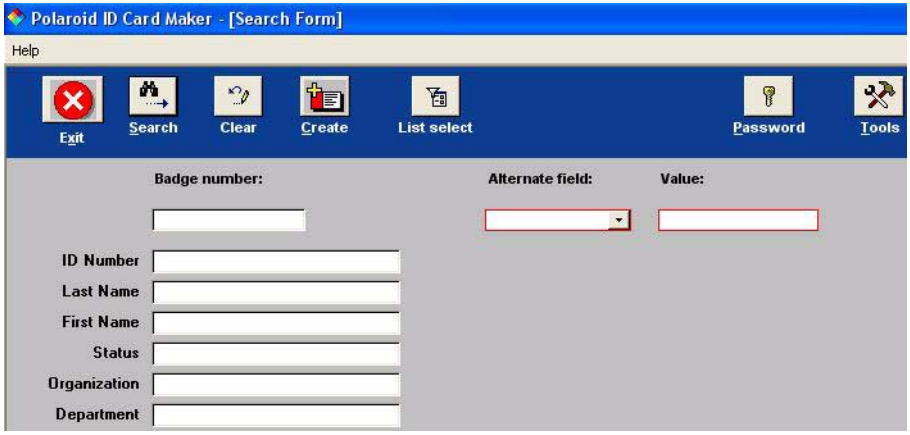
Note: Network Dat repair can only be completed by a single operator and all other workstations must be logged off.

Microsoft Access runs an internal “integrity” check each time you open a database. In rare instances, if your database is damaged, an alert window appears when you first try to launch ID Card Maker. The alert informs you that damage has been detected and that a repair will be attempted. Click YES in that alert window to initiate the repair. When the damage is repaired, the ID Card Maker database is opened.

CHAPTER 4

Search Form

When you first launch ID Card Maker, ID Card Maker's "home page" appears. Most of ID Card Maker's commands and functions are "button driven." That is, the most commonly used functions such as printing, searching, capturing images, etc. are initiated by clicking an easily identifiable button. The "home page" offers the following buttons:



ID Card Maker's "home" page

EXIT	The EXIT button is used to exit ID Card Maker. Always use EXIT to quit ID Card Maker rather than the standard Windows "close" boxes at the corner of the windows; failure to do so may leave temporary files open, wasting disk space and RAM.
SEARCH	The SEARCH button initiates a query of the database based on the search criteria you enter in the text fields below. If you do not enter any search criteria and click SEARCH, *all* records will be found.
CLEAR	The CLEAR button erases all the search criteria previously entered so you may quickly begin a new query.
CREATE	The CREATE button immediately presents an empty database record so you may enter new personnel data.
LIST SELECT	The LIST SELECT button allows you to immediately call up records for groups of people whose names (or other identifying information) are already listed in a text document.
PASSWORD	The PASSWORD button allows the ID Card Maker user to change his or her logon password. The PASSWORD button does not appear until at least one user account with System administration privileges has been created. (For security purposes, it is highly recommended that user passwords be changed frequently.)
TOOLS	The TOOLS button takes you to an area where ID Card Maker's "tools" are located, e.g., setting application preferences, designing ID badges, importing and exporting data, etc.

In the main body of the "home page" are "Search fields." When you first install ID Card Maker, the "Search fields" are pre-defined. You may add or delete fields from this Search window by adding or deleting your database fields' Index property. (See "Attaching to Another Database" on page 79.)

Searching for Records

You may search for an individual's record or group of records from this Search window. ID Card Maker offers five methods for performing searches:

- Searching with a Roster List
- Searching with Indexed fields
- Searching with the "Alternate" field
- Searching with SQL
- Searching with Report Queries

The indexed search fields appear in the top left of the Search window and are named "SS No," "Last Name," "First Name," "Status," "Company," and "Department." (The fields in this window may be different if you deleted or changed the Index property of fields in the Database Management portion of ID Card Maker.) The "Alternate" field is a pick list box that lists every field in the database. The SQL search and sort fields appear at the bottom of the window only if SQL has been enabled in ID Card Maker's Configuration window.

Searching with a Roster List

If your organization's third-party software for recording personnel information can also generate comma-delimited ASCII text files, these text files may be used as a query tool. For example, if someone uses third party software to export the student ID's of all the students on the Junior Varsity football team, and gives it to you as a text file on a floppy disk, you may easily find those records by clicking LIST SELECT, and selecting that file within Windows "open dialog." A query for those students is immediately performed and displays those students in ID Card Maker's Personal Data window.

In order to use an external file as a roster list:

1. The third party application must save the data to an ASCII text file (a file with a ".txt" for its file extension). The file may contain data extracted from any field in the third party software as long as there is an equivalent field in ID Card Maker's database. The file may contain data from more than one field used by the application. (It is easiest to export a single field representing a value unique to each record, such as a student or personal ID number.)
2. If the application exports data from more than one field, a comma must separate the values. For example, if the application generated first, middle, and last names, the data must look like "David, Cameron, Scott" for every student in the list.
3. The text file must be edited so that a new first line is added. The first line must name the database field(s) containing the information in the list below (e.g., firstname, mid-

dlename, lastname). A comma must separate each database field name. If more than one field is used, the database field names must be in the same order as the exported values (i.e. if the list shows all the students' last names first, the first line of the text file must also show the lastname first).

4. The field name typed in the first line of the text file must exactly match the equivalent field in the ID Card Maker database. (For example, if the third party application exports data from the "student_number" field, but ID Card Maker uses the field "IDnumber" as the equivalent, edit the text file so "student_number" is renamed "IDnumber." If the word is mis-typed, the query will fail.)
5. If the first line of the external text file contains multiple fields (e.g., firstname, middlename, lastname), only student names in the list which contain all three names will be "found." That is, if a student is entered in the list as "David, Scott", he will not be displayed in the resulting Personal Data window; only if his name appears as "David, Cameron, Scott" will he be "found." Names must "match" the criteria of the first line in this text file in order to succeed.

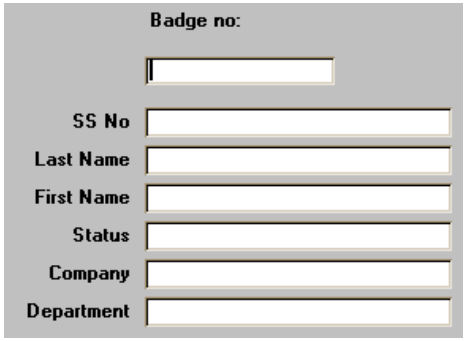
Alternately, you may easily create your own Roster Lists from the Batch window.

1. In the Search window, enter search criteria to find the desired set of records and click SEARCH.
2. In the Personal Data window, click BATCH.
3. In the Batch window, click CREATE FROM SELECTED RECORDS. ID Card Maker prompts you to name and save the found set of records as a roster list. (In the future, you may add or remove individuals from this roster list. See "Record History" on page 170.)
4. From now on, you may use this and other "Batch created" rosters lists from the Search window to quickly find a group of records.

Searching with Indexed Fields

The text fields displaying in the top left of the Search window are indexed for faster searches. When a field is "indexed," Microsoft Access creates a hidden list of the contents of this field for every record in the database. It can find data faster by looking first in this "index" rather than "physically" searching each record for the data. You may index any

field in the database. (See “Attaching to Another Database” on page 79.) All indexed fields appear in the Search window.

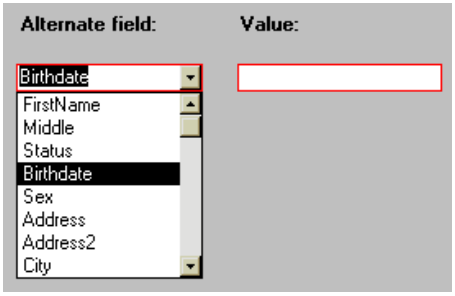


Enter a “value” (text, date or number) that is unique to the individual for whom you are searching in the corresponding search field. (For example, type the person’s social security number in the “SS No” field.) After entering this unique value in the search field, click SEARCH. The individual’s record appears in the resulting Personal Data window. If you know a unique value for an individual, your search will always be successful. If you do not know these unique values, you will need to use other fields to perform your search. In a small database you might successfully find the person named “Ernesto” by typing “Er” in the First Name field. In a large database, however, typing “Er” might also find all the “Ernie’s,” “Ernest’s,” and “Ernestine’s,” etc. Therefore, to find only “Ernesto,” you might need to enter his entire first name, last name, and possibly date of birth as well, in the corresponding fields. If you do not know an individual’s unique value, enter as much information in appropriate fields as you can. The more data you enter, the more likely the search will yield the individual for whom you are looking. Searches in these fields use Microsoft Access’ “like” operator (which finds records containing data “like” that which is entered), so it is not necessary to enter the complete word. But entering partial information in the Value field may find more records than you intended.

If more than one record matched the search criteria, the “record status bar” at the bottom of the window indicates how many records were found. Click the left or right arrows to advance forward and backward through the found set of individuals (or use the Page Up and Page Down keys on the keyboard) until you find the one for whom you are looking.

Searching with "Alternate field"

You may perform a search of any field in the database using the ALTERNATE FIELD pick list to the right of the indexed search fields. The ALTERNATE fields are not indexed so the search may take a little longer depending on the size of your database. Select a field from



this list and type the search criteria in the VALUE field to the right. Searches in this field use Microsoft Access' "like" operator (that is, it finds records which contain data "like" that which is entered), so it is not necessary to enter the complete word. But entering partial information in the VALUE field may find more records than you intended.

You may also enter SQL expressions in an ALTERNATE FIELD (see "Searching with SQL" immediately below). SQL "arguments" in the ALTERNATE FIELD must begin with an equal sign (=). Example (=="Wilson"). Once the equal sign is entered, the search is no longer based upon Microsoft's "like" function; a search for "wil" will not find "Wilson."

If more than one record matched the search criteria, the "record status bar" at the bottom of the window indicates how many records were found. Click the left or right arrows to advance forward and backward through the found set of individuals (or use the Page Up and Page Down keys on the keyboard) until you find the one for whom you are looking.

Searching with SQL

If you checked the option "Enable SQL" in ID Card Maker's Configuration window, two separate fields display at the bottom of the Search window. The first field, "SQL WHERE clause," allows you to use a variety of "SQL" (Structured Query Language) search functions. (Appendix B shows examples of common Microsoft Access SQL expressions.) The

second field, “SQL ORDER BY clause,” instructs ID Card Maker to sort the search results by the field(s) entered in this text box.

Note: There may be occasions when you inadvertently enter an invalid SQL search string. Microsoft Access may present an error message stating it cannot perform the search you requested. If you find yourself in a “loop” of error messages, simply press the Escape key on your keyboard. This will “clear” the query from memory and allow you to start over.

- Literal text must be enclosed within quotation marks (“”)
- Dates must be enclosed within pound signs (#)
- Arguments containing AND or OR must be enclosed within parentheses
- A WHERE clause can contain up to 40 expressions linked by logical operators, such as And and Or

Follow the examples below when entering SQL expressions:

[fieldname] [Boolean operator] [value]

lastname = “Scott”

lastname BETWEEN “a” And “m”

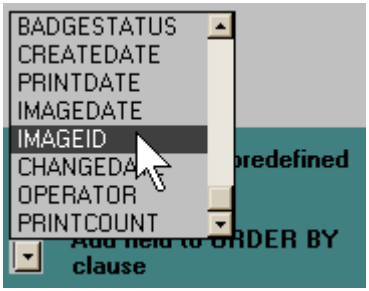
EmployID BETWEEN 1 And 200

salary > 21000

Sorting with SQL SORT BY

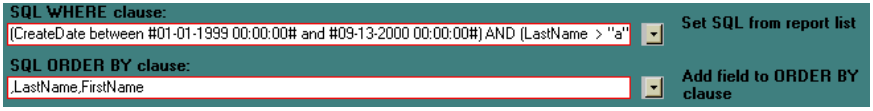
If your search is designed to find a group of records, you may sort the results alphabetically or by date (depending upon which field type you use for the sort). Type a field name in the SQL ORDER BY clause field, or select the sort field using the pop-up ADD FIELD TO ORDER BY pick list. ID Card Maker defaults to sorting the search results in ascending

order. If you wish to sort the results in descending order, type a space after the field name, followed by “desc” without the quotes (e.g., LastName desc).



Searching with Report Queries

In addition, you may easily perform searches based upon the queries you created in the Reports window. Click the SET SQL FROM PREDEFINED REPORT button to pop-up a list of your Reports. The search and sort criteria used in the selected report will be inserted into the “SQL Where clause” and “SQL ORDER BY clause” fields.


SQL WHERE clause:
(CreateDate between #01-01-1999 00:00:00# and #09-13-2000 00:00:00#) AND (LastName > "a"
Set SQL from report list
SQL ORDER BY clause:
,LastName,FirstName
Add field to ORDER BY clause

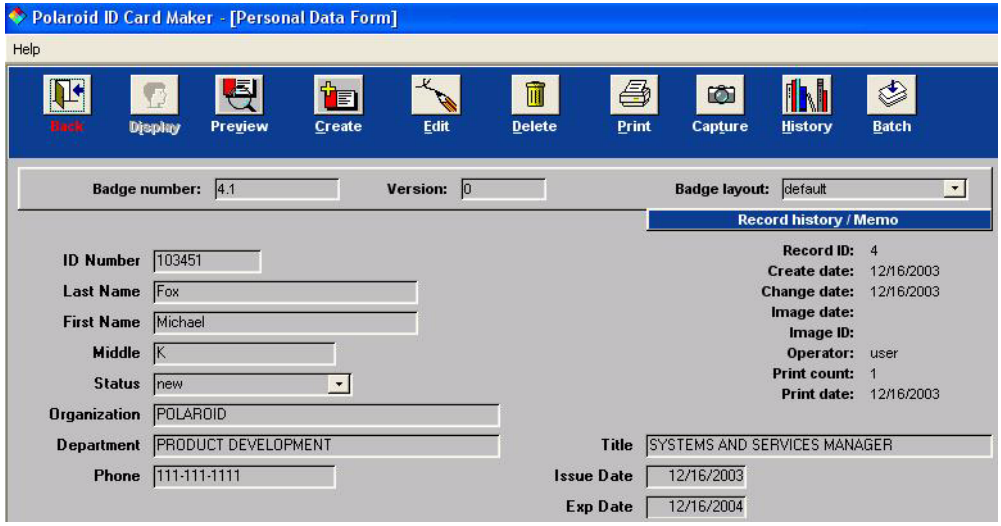
After entering the search criteria, press Enter on your keyboard or click SEARCH.

To clear all the data in the search fields, click CLEAR.

CHAPTER 5

Creating Badges (Personal Data Form)

After performing a search for one or more records, ID Card Maker brings you to a Personal Data window. This window displays the result of your search. At the top of this window are easily identifiable buttons:



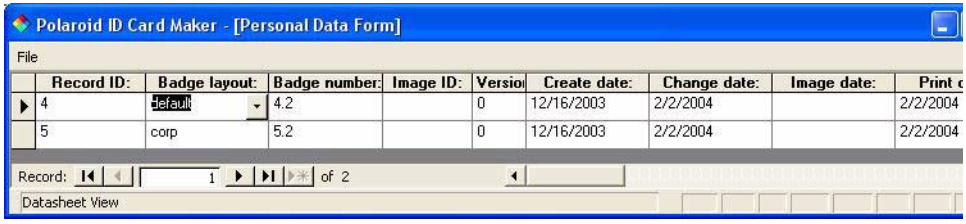
BACK	The BACK button returns you to the previous window, the Search or "home page."
DISPLAY	The DISPLAY button displays captured images for the individual. *Note: If you captured portraits, fingerprints and signatures, but later deselected fingerprint and/or signature in ID Setup, the deselected images will not display. Also, if you specified more than one "Instance" of portrait, fingerprint or signature capture in ID Setup, but canceled any of the image captures, some display windows may appear blank with a red "X" in them—denoting that an image was not captured.* You may close image windows with a single click by clicking an empty area above or between the buttons at the top of this window.
PREVIEW	The PREVIEW button displays a preview of the individual's ID badge. Close the badge preview window by double-clicking inside the badge or clicking the "close box" at its top-right corner.
CREATE	The CREATE button creates a blank record in which you may immediately enter new data. When you click CREATE, the CREATE button turns into a SAVE button. Clicking SAVE saves the record.
EDIT	The EDIT button enables editing a record's data. Until you click EDIT, the database fields are "grayed out"—un-editable. If you click EDIT, the EDIT button turns into an UNDO button. Clicking UNDO removes the last action taken in a database field.
DELETE	The DELETE button deletes the current record. You are given a warning to confirm the deletion before the record is actually deleted. This includes ALL images, portraits, fingerprints, and signatures.
PRINT	The PRINT button sends the current record's badge to the printer. Depending on which option you selected in the Printer Options dialog of ID Setup, the badge may be printed immediately or sent to a print queue.

CAPTURE	The CAPTURE button initiates image capture. You will be presented with as many "capture windows" as you specified in ID Setup (e.g., 2 portraits, 10 fingerprints, 1 signature, etc.) New feature to change from assigned camera to capture from file on the fly: Hold down the ALT key while selecting the primary capture.
HISTORY	If you enabled "Data history" or "Badge history" in ID Card Maker's Configuration window, a HISTORY button presents a history of badges issued and/or all actions performed on the current record. (ID Card Maker will not start logging "events" until after the Badge History or Data History options are enabled.)
BATCH	The BATCH button allows you to perform edits, prints and deletes on more than one record at a time. It also allows you to create and edit roster lists.

Level I
Level II

Note: if you enabled DISPLAY PERSONAL DATA FORM AS A LIST in the Configuration window, the following window appears after clicking SEARCH:

Level I
Level II



Personal Data form viewed as a list

Records in the database are viewed in columns and rows. Each column represents a database field; each row represents a database record. Clicking on any record selector (triangle in the left margin of the window) takes you immediately to that record in the original Personal Data form. Once in the original Personal Data form, double-clicking in the empty, gray area below the text fields returns you to the "list view." You may re-arrange the order of the columns in "list view" by clicking one on the column heading to select it, then clicking and dragging the column left or right to a new position.

Create and Edit

Click EDIT to change data in an existing record, or click CREATE to create a blank record to enter data for a new individual. Use the "Tab" or "Enter" keys to move the cursor from one field to another. (Use "Shift-Tab" to move the cursor backward through the fields.) Alternately, you may mouse-click in the field in which you wish to enter information. When your cursor is in a pick list field—a field whose arrow on the right side indicates that a pick list is available for additional options—you may click on the down arrow or press "Alt-↓" to make the list of choices available. Begin entering the individual's information.

When you have finished entering information, click SAVE. If you change your mind and do not want to create or save the record you are editing, click UNDO at the top of the window. An alert message asks if it is OK to undo the changes you made. If you do not want to save the data you entered, click YES to return to ID Card Maker's "home page."

If, after saving a record you discover you must add, delete, or change data, click EDIT again. The text fields are now editable. When done, click SAVE to save your changes.

If you want to delete a record, click DELETE. A warning appears on-screen asking you to confirm your choice, and deletes the record's images as well.

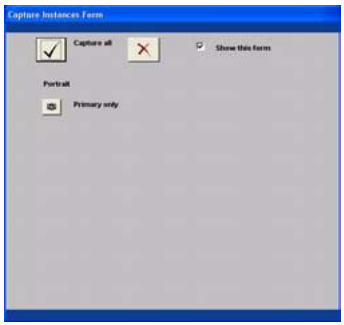
Capture

Click CAPTURE to take portrait, signature and fingerprint images. The CAPTURE button remembers your settings from IDServer Setup in which you specified which hardware "capture" devices you are using, and how many images of each type you wish to capture. If you only checked the "Portrait" option in IDServer Setup, CAPTURE prompts you to take a portrait. If you checked the fingerprint and/or signature options in IDServer Setup, you will be prompted to take each of those images.

(If you are using a Video for Windows or TWAIN device and configured ID Card Maker for that device in IDServer Setup, the moment you click CAPTURE your TWAIN or Video for Windows software is launched. Your image capture options are then executed outside of the ID Card Maker environment. Only after you click "save" or "transfer" from your TWAIN or Video for Windows software are you returned to the ID Card Maker application.)

Portraits

Click CAPTURE in the Personal Data Form. The Capture Instances Form appears.



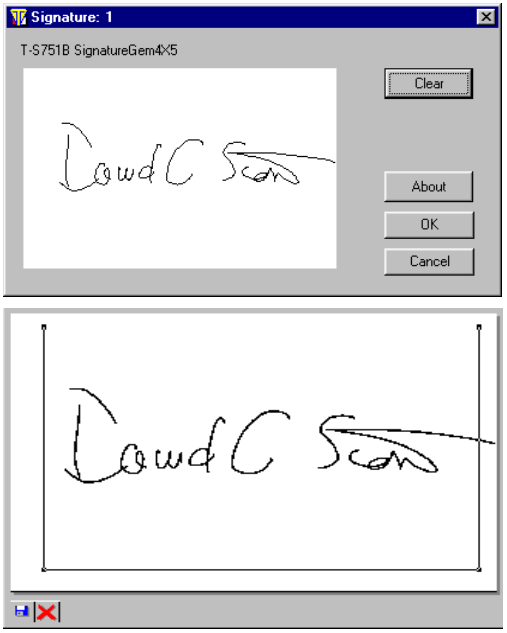
To capture a single image of the individual whose name is in the database record, click the PRIMARY ONLY button.

If you enabled multiple image captures in the Graphics Definition dialog of IDServer Setup, you can click the green ✓ CAPTURE ALL button to capture all of the specified images. The additional images may be used for parents, guardians, school teachers, or other individuals. In this way you may easily retake a guardian or teacher's portrait without having to re-take everyone else's. The × button allows you to close the box without capturing an image.

When you click CAPTURE ALL or PRIMARY ONLY, the PDC 2150 Capture Dialog appears displaying a preview of the image. Select from the Flash settings, then click CAPTURE.

Signatures

After saving the portrait(s), the signature capture screen appears. Have the individual sign his or her name firmly on the signature pad using the special stylus. The signature appears in the on-screen signature window. If the signature is satisfactory, click OK. If it is unacceptable, click the CLEAR button. Immediately after saving the signature image, a cropping window appears. Drag a corner of the cropping rectangle so it encloses the person's signature. Move the cropping rectangle by clicking and dragging it. (Hint: for best results, crop as closely to the actual signature as possible. Leaving extra "white space" around the signature degrades the image quality of the final signature.) Remember, you can adjust the thickness of the "pen" by returning to the TOOLS➲CONFIGURATION➲IDSERVER SETUP➲MORE beside the Signature option and click DEVICE SETUP where you may reset the thickness of the "pen.") *Note: If you reset the pen's thickness, the change will not be visible during the "live" signature capture. Only when you are in the cropping window which immediately follows will you see the difference.*



Re-size and drag the cropping window so it encloses the signature.

If you enabled multiple signature captures in the Signature Graphics Definition dialog of ID Setup, the "Multiple Image Capture" window will appear.

Fingerprint

After the signature has been saved, the fingerprint capture window appears. Follow the steps above to capture and save the fingerprint.

Fingerprint Capture window

Printing

Badge Printing

Depending on whether or not you chose USE BATCH PRINTING in the Printer Options dialog of IDServer Setup and which option you selected for BATCH QUEUE MODE, the following occurs when you click PRINT:

1. *If you did not select batch printing:* the individual's badge prints immediately.
2. *If you selected batch printing-Always Ask:* a dialog box pops up offering two choices: PRINT NOW and QUEUE. If you click QUEUE, the badge you just commanded to print is sent to the queue awaiting later print instructions. If you want to PRINT NOW, you can choose to print only the one badge for which you just clicked PRINT, or print all the badges currently held in the queue. Select either PRINT ENTIRE QUEUE or PRINT MOST RECENT, then click PRINT NOW. (You might have a batch of badges held in the queue for later printing, but you need the badge printed now, call up that record and click Print. This dialog allows you to print the most recent badge without waiting for all the other badges to print). If Use Sheet Formatting is enabled, this dialog will also allow

you to specify where on the sheet layout the queued badges will begin to print. (This allows you to re-use a pre-printed badge form if several panels on the form have already been used.) Click the "+" button to advance the starting position on the sheet..

If printing to a card printer

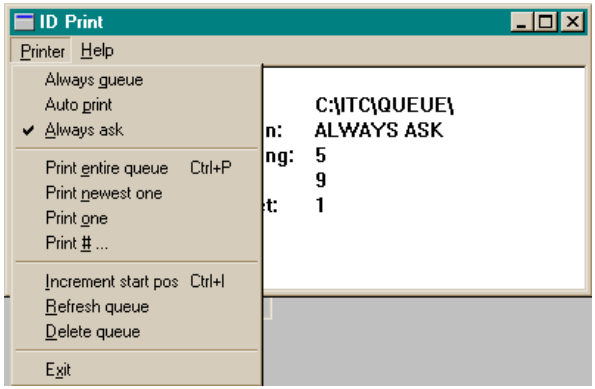
If printing to a sheet printer

3. *If you selected batch printing-Auto Print:* one of two things may happen. If SHEET PRINTING is not enabled, the badge prints immediately. If SHEET PRINTING is enabled, the card is queued until the page is filled with cards. (Use the Sheet Layout dialog in ID Setup to determine how many cards are printed on a single sheet of paper—when that number of cards is reached in the queue, the page automatically prints.)
4. *If you selected batch printing-Always Queue:* the badge is always sent to the queue awaiting later instruction to print the contents of the queue.

ID Print

When you click PRINT (or ADD TO QUEUE from the Batch window), ID Card Maker's "ID Print" program launches in the background; its program icon appears on Windows' Task

Bar. Selecting ID Print brings the application window to the front. In the ID Print window, you may pull down the PRINTER menu to select a variety of print options.



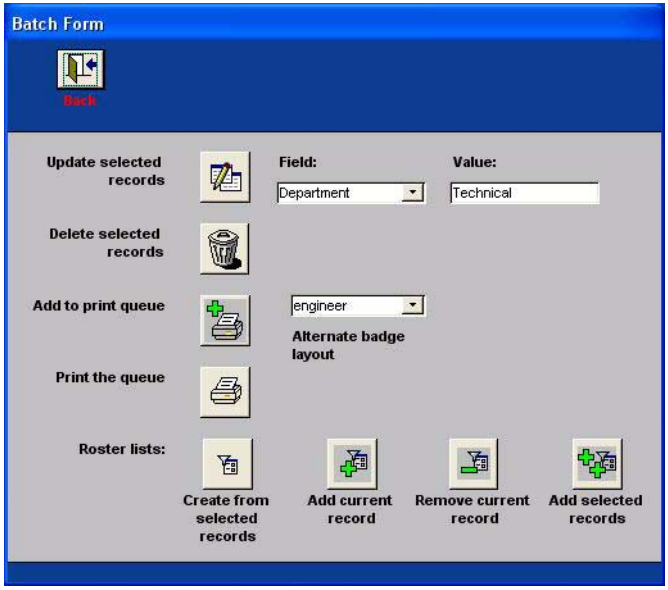
ALWAYS QUEUE	This is the same option you set in the Printer Options dialog of ID Setup. With this option selected, badges will always be sent directly to the print queue to await later printing.
AUTO PRINT	This is the same option you set in the Printer Options dialog of ID Setup. If SHEET PRINTING is not enabled, the badge prints immediately. If SHEET PRINTING is enabled, the card is queued until the page is filled with cards.
ALWAYS ASK	This is the same option you set in the Printer Options dialog of ID Setup. With this option selected, a dialog box prompts you to print the badge now or queue it.
PRINT ENTIRE QUEUE	Selecting this will immediately print the contents of the queue.
PRINT NEWEST ONE	Selecting this option prints the most recent print request. This allows you to print one badge while leaving the remaining badges in the print queue for later printing.
PRINT ONE	Selecting this option prints the first badge in the print queue. (If badges “1,” “2,” “3,” “4,” and “5” were queued for printing, the first time you select PRINT ONE, badge “1” is printed. The next time you select PRINT ONE, badge “2” will be printed, and so on.)

PRINT #...	Selecting this option allows you to print a specified number of badges currently held in the print queue. Selecting it brings up a dialog in which you enter the number of badges to print. If you selected USE SHEET FORMATTING in the Printer Options Dialog of ID Setup, note that the "number" refers to the number of pages to print, not individual badges.
INCREMENT START POSITION	This option is only enabled if you selected USE SHEET FORMATTING in the Printer Options dialog of ID Setup, and allows you to specify where on the sheet layout the queued badges will begin to print. (This allows you to "re-use" a pre-printed badge form if several panels on the form have already been used.) Note: the number must match the numbering scheme you set in the Sheet Layout dialog: the numbers run either top to bottom or left to right.
REFRESH QUEUE	This option refreshes the queue to reflect changes due to the completion of printed badges.
DELETE QUEUE	Selecting this option will delete the contents of the print queue.
EXIT	Selecting EXIT quits the ID Print program. It will automatically restart the next time you send a badge to the print queue or instruct ID Card Maker to print a badge. NOTE: The queue must be empty before changing from sheet printing to card printing.

Batch Printing

Clicking BATCH brings up a Batch window for performing actions on a group of records. The following "batch operations" are available: UPDATE, DELETE, ADD TO PRINT QUEUE, PRINT THE QUEUE, CREATE (ROSTER) FROM SELECTED RECORDS, ADD CURRENT RECORD (TO ROSTER), REMOVE CURRENT RECORD (FROM ROSTER), and ADD SELECTED RECORDS (TO ROSTER). These "batch operations" only effect the "found set" of records. That is, you

must first perform a “query” or search for the group of records you want to do something with. Only the records that “have been found” as a result of the query will be acted upon.



Update

“Update” is a powerful feature, allowing you to change a value for a group of records in one step. There are two ways to update records:

1. If a record already contains the correct information that you want updated across the “found set” of records, click once in the field containing the correct information. Then click BATCH in the Personal Data window. (The field name and field contents are displayed in the Batch window.) Click UPDATE SELECTED RECORDS in the Batch window. ID Card Maker presents an alert message asking you to confirm the changes.
2. Click BATCH in the Personal Data window. In the Batch window, click the down arrow of the FIELD pick list and select the database field to update. Type the “value” you want updated in that field for the “found set” of records. Then click the UPDATE SELECTED RECORDS button. ID Card Maker presents an alert message asking you to confirm the changes. (The UPDATE SELECTED RECORDS button is disabled until you select a field for updating.)

Delete

Click DELETE SELECTED RECORDS to delete the "found set" of records plus their associated images. An alert message appears asking you to confirm the deletion. Once the records are deleted, they cannot be restored except from a backup source.

Add to print queue

Click ADD TO PRINT QUEUE to send badges of the found set of records to the print queue. The badges will remain in the print queue until you click PRINT THE QUEUE.

Next to the ADD TO PRINT QUEUE button is an ALTERNATE BADGE LAYOUT pick list. You may use this to print a badge other than what has been assigned the individual(s) in the Personal Data window. *Note: This will not update the individual records.*

If you want to issue a temporary badge to a select group of individuals, select that "temporary" badge from the list. When you add the selected records to the print queue and print the badges, the specified badge will print, rather than the one previously assigned to them.

If you created a "badge" design for use as a "roster," you may select this badge layout and print the selected records as a roster.

Print the queue

Click PRINT THE QUEUE to print the contents of the print queue. (Note: you may print the contents of the print queue both here and from within the Tools window.)

Roster lists

Roster lists are a powerful way to simply repeat complex queries.

CREATE FROM SELECTED RECORDS

After you have performed a query that you are likely to repeat again, click the CREATE FROM SELECTED RECORDS button in the Batch window. ID Card Maker will extract each of the found records' IDNumber and write it to a simple text file. You are prompted to name and save the file. Use any name meaningful to you. In the future, when you wish to repeat this query, use the LIST SELECT button in the Search window rather than recreating the query properties.

ADD CURRENT RECORD

You may add the currently opened record to any list. Once you click ADD CURRENT RECORD, a Windows Open dialog asks you to select the roster list to which you wish to add this record.

REMOVE CURRENT RECORD

You may remove an individual from any roster list. With the record you wish to remove open in the Personal Data window, click BATCH. Then click REMOVE CURRENT RECORD. The Windows Open dialog opens. Select the roster list from which you wish this record to be removed.

ADD SELECTED RECORDS

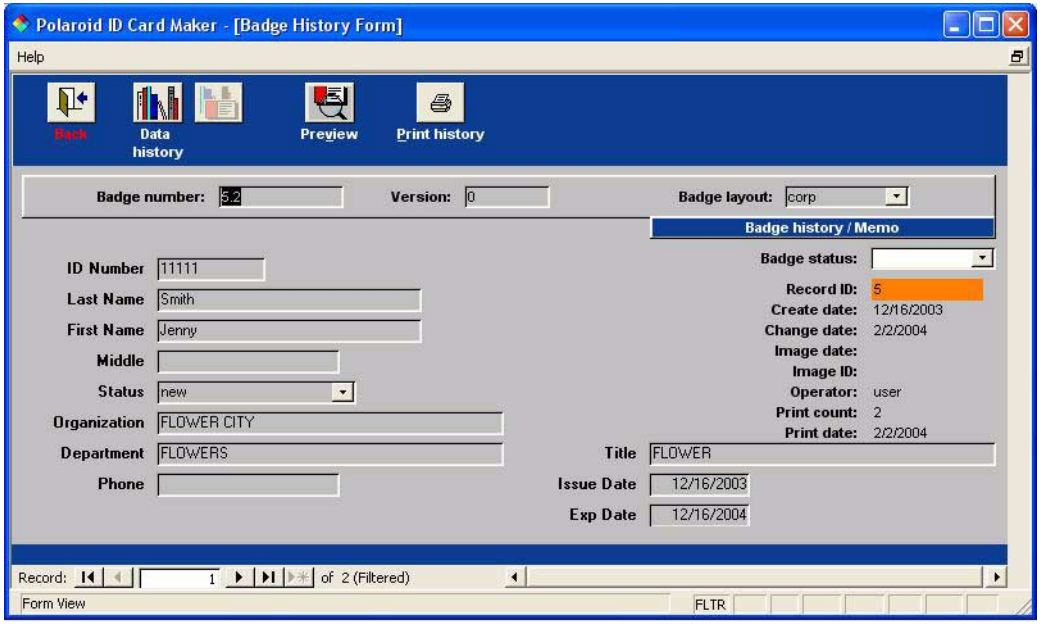
In addition to adding individuals to a roster list, you may add a *group* of records. Perform the query to find the group you wish to add, then click ADD SELECTED RECORDS. A Windows Open dialog opens. Select the roster list to which you wish to add the "found set" of records.

History

If you enabled either Badge History or Data History in the Configuration window, a HISTORY button appears in the Personal Data window. Depending on what you enabled, clicking HISTORY presents a History window displaying one or two kinds of history: *history of badge issues* and *history of specific actions taken on a record* (such as text edits, dates of image capture or badge printing).

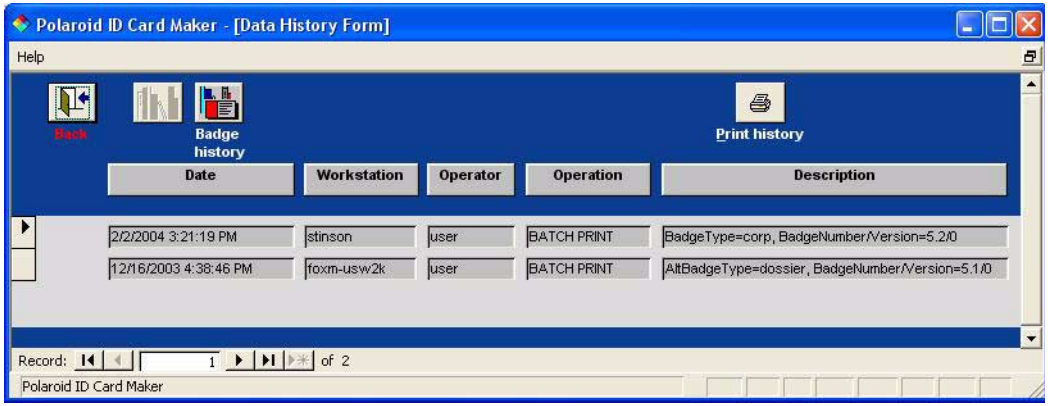
If Badge History is enabled and a record's badge has been printed at least once, clicking HISTORY takes you to the Badge History window. (Otherwise, if Badge History is enabled

but the badge has not yet been printed, you are taken to the Data History window. Badge history and Data history buttons toggle between the two views.) A "record count" indicator at the bottom-left corner of the window indicates the number of times a badge has been printed. The first record (indicated by a number one in the record indicator) refers to the most recently printed badge. Scrolling back through the records is like looking back in time; each record is a "snapshot" of the data in that record the moment the previous badge was issued. As you scroll through the records, fields whose data is different from the record *as it is now* are highlighted in orange. A PREVIEW button allows you to view each version of the individual's badge; "old" data is displayed in the preview window exactly as it was originally printed.



To view the history of actions performed on a record, click the DATA HISTORY button at the top of the window. Each row in the scrolling window reflects an event or change in a database field (such as image capture, or badge print). Note: data changes recorded here will not be displayed in the Badge History window if a badge has not yet been printed since that change was made. That is, if the record's last name was changed from "Smith" to

"Jones," but the badge had not yet been printed with the new name "Jones," the change would be reflected in the Data History window but not the Badge History window..



Data History form

The following information is recorded in the record's history:

DATE	This is the date the action was performed. To sort the history by date, click the DATE button. Click DATE again to sort by date in reverse order.
WORKSTATION	This is the name of the workstation where the action was performed. In a networked environment, each workstation has a unique name. To sort the history by workstation name, click the WORKSTATION button. Click WORKSTATION again to reverse the sort order.
OPERATOR	This is the user name of the operator who performed the action. (The user name is the name entered at logon.) To sort the history by user name, click the OPERATOR button. Click OPERATOR again to reverse the sort order.
OPERATION	This identifies the action that was performed in the record. Click the OPERATION button to sort the history by operation. Click OPERATION again to reverse the sort order.
DESCRIPTION	This offers a more detailed description, when applicable, of the operation that was performed. Click the DESCRIPTION button to sort the history by description. Click DESCRIPTION again to reverse the sort order.

Record History

In the top right of the Persons Found window are non-editable fields displaying history information for each record.

Record ID	This is a unique number assigned to each record as it is created.
Create Date	This is the date the record was created.
Change Date	This is the date of the last modification to the record.
Image Date	This is the date of the most recent image capture.
Image ID	This is the "name" of the image file(s). ID Card Maker saves all images with a "number" name. To find a person's image in Windows Explorer, search for this number in the Portrait, Signature and Fingerprint directories.
Operator	This is the ID Card Maker operator who most recently modified the record.
Print Count	This is a serial counter of the number of times a badge has been printed.
Print Date	This is the date a badge was last printed for an individual.

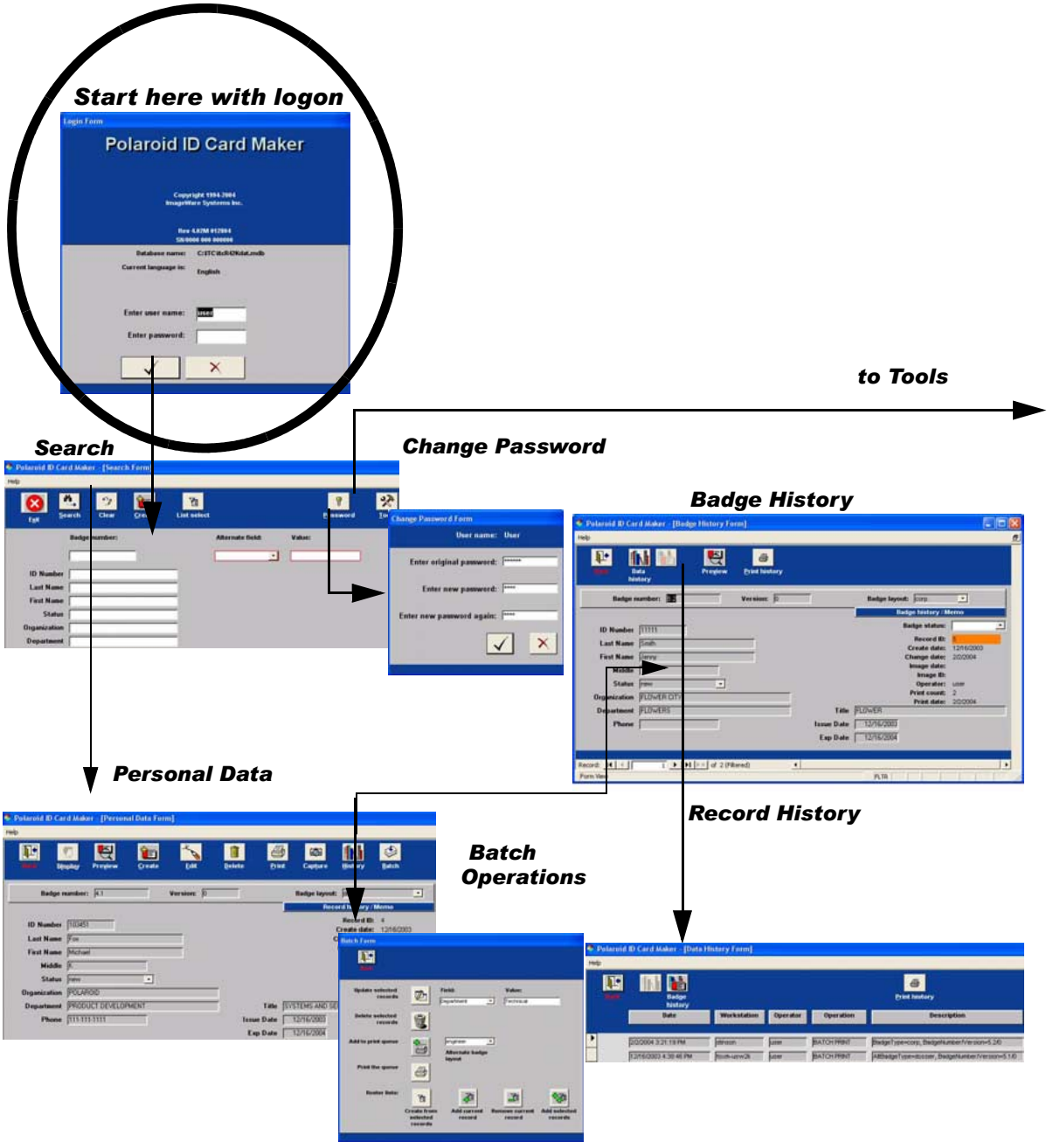
Memo Field

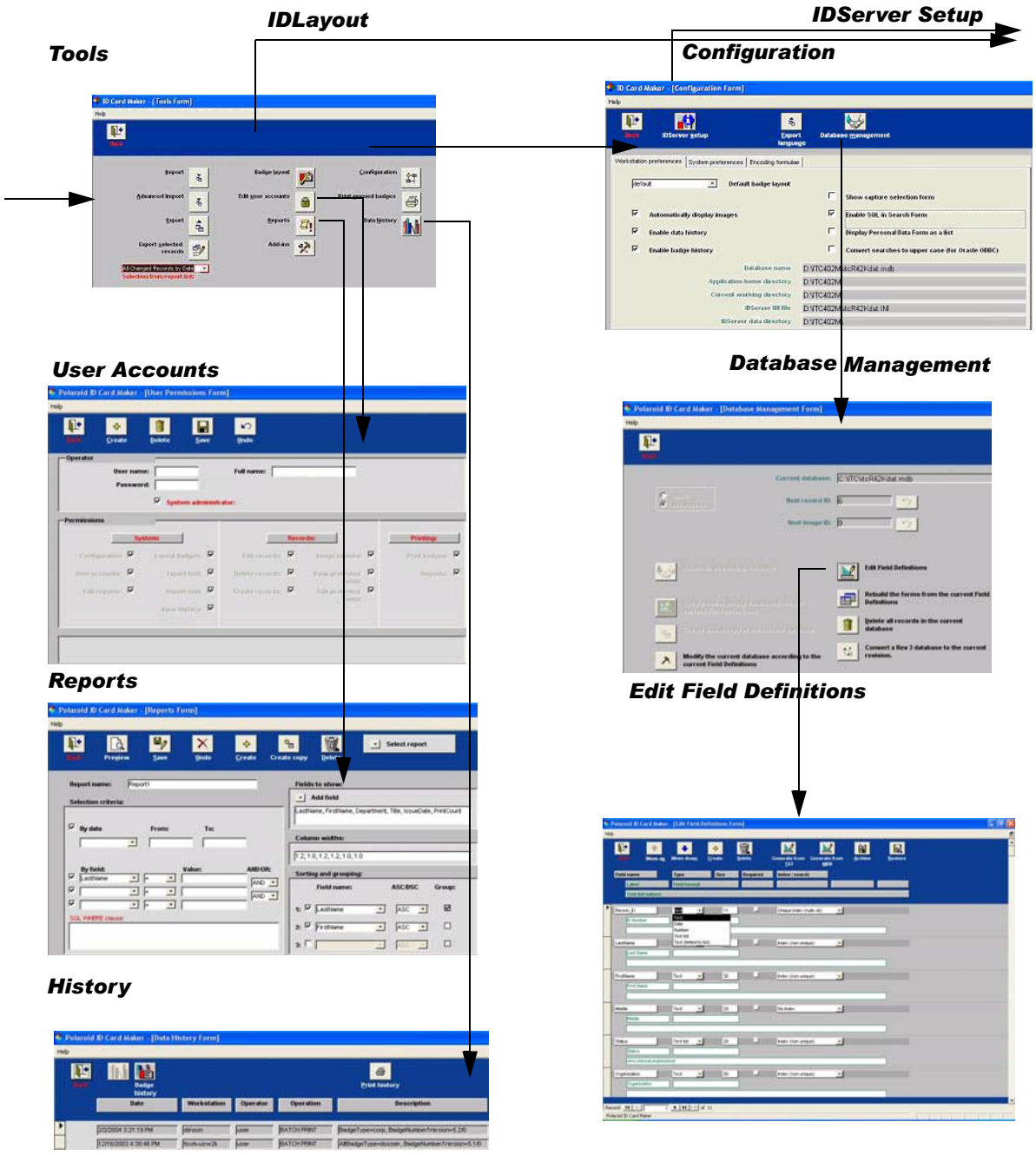
Click the orange Record History label above the record history. The history disappears and a memo field appears in its place. Click the EDIT button to enter or edit a memo. You may enter up to 65,000 characters.

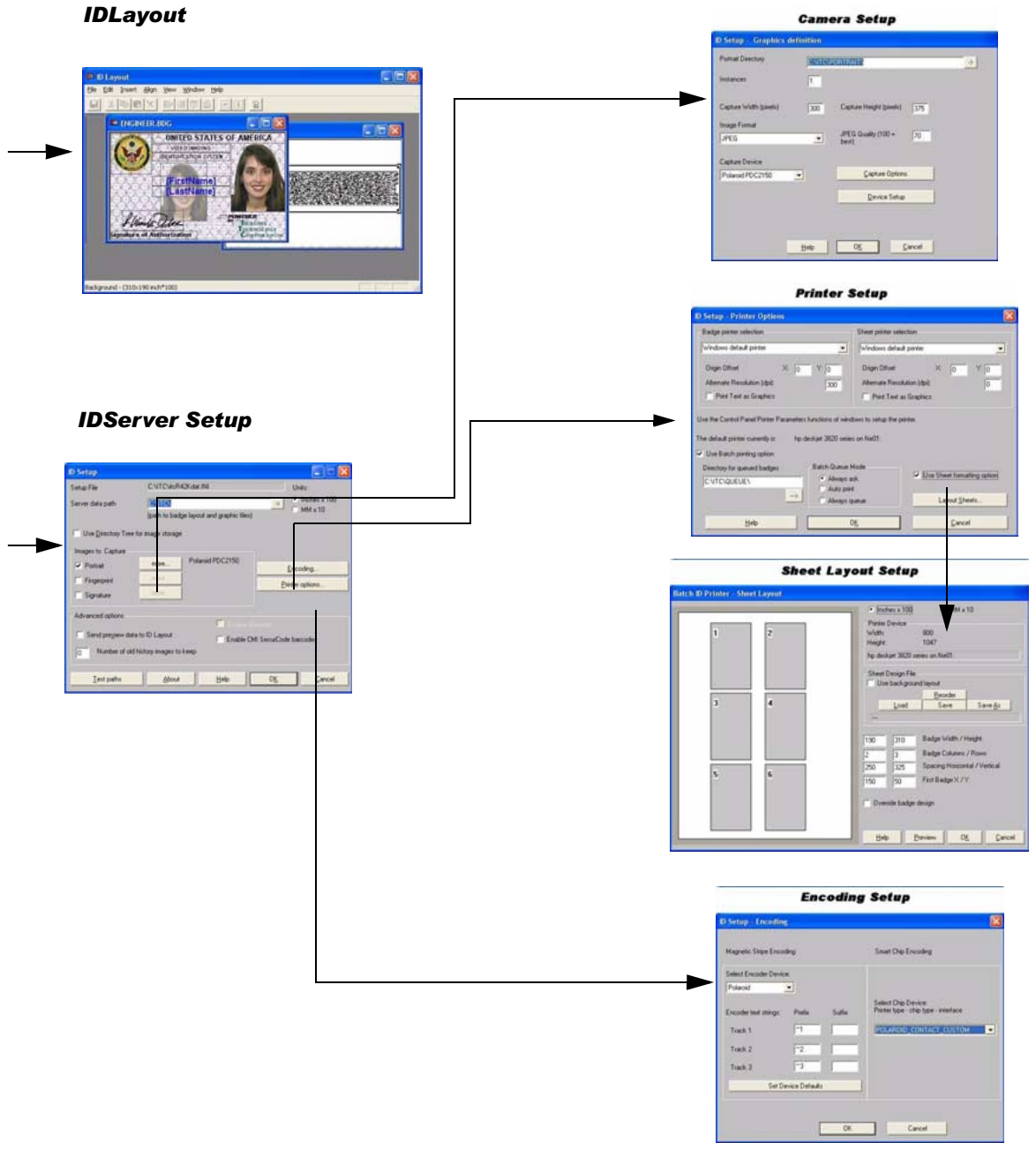
Appendix A

Navigating ID Card Maker

ID Card Maker, based on Microsoft Access, uses "Forms" as a way to view data and perform functions. ID Card Maker logically organizes the many functions related to database management such as, badge printing, image capture, reporting to name a few. The graphics on the next several pages provide a "road map" of ID Card Maker.


Start here with logon
Polaroid ID Card Maker
to Tools
Search
Change Password
Badge History
Personal Data
Record History
Batch Operations


IDLayout
IDServer Setup
Tools
Configuration
User Accounts
Database Management
Reports
Edit Field Definitions
History


IDLayout
Camera Setup
IDServer Setup
Printer Setup
Sheet Layout Setup
Encoding Setup

Appendix B

Graphic File Formats

In the following table, a portrait image was captured at 300 by 375 pixels (1 by 1.25 inches). The "File Size" column shows the size of each image saved in various file formats. ID Card Maker accepts graphic images in any of the following formats.

TABLE 1. Graphic File Formats

Image Format	Color Depth	File Size	Description
JPEG	24 bit	12k	"This format provides the best compression, but image information is lost during compression. JPEG is an acronym for "Joint Photographic Experts Group." Writes a ".JPG" file extension"
TIFF Compressed	24 bit	11k	"This format gives the best compression without losing image information. TIFF is an acronym for "Tagged Image File Format." Writes a ".TIF" file extension."
TIFF Huffman	1 bit	12k	This format uses 1 bit per pixel. For black and white images only; not greyscale.
TIFF	24 bit	331k	"No compression. Writes a ".TIF" file extension."

TABLE 1. Graphic File Formats

Image Format	Color Depth	File Size	Description
PCX		221k	"Format compatible with ZSoft Corporation's Paint Brush program. Writes a ".PCX" file extension."
TGA (24 bpp) Uncompressed	24 bit	330k	"TrueVision's Uncompressed TARGA format. Writes a ".TGA" file extension."
BMP	24 bit	330k	"Windows uncompressed bitmap. Writes a ".BMP" file extension."
BMP Compressed	8 bit	90k	"Windows compressed bitmap. Writes a ".BMP" file extension."
WMF	24 bit	330k	"Windows MetaFile. Writes a ".WMF" file extension."
PICT	24 bit	222k	"Apple Computer's format for the Macintosh. Writes a ".PIC" file extension."

Appendix C

Hardware Setup

Though your options for cameras, printers, lighting, etc. are nearly endless, the following will describe the “typical” installation issues and procedures for some common components.

PDC 2150 Camera

To install the Polaroid PDC 2150 camera, plug the USB cable into any available USB port on your computer. For additional installation information, refer to the camera installation guide.

Signature Tablet

Topaz SignatureGem

The Topaz SignatureGem 1x5 Model T-26 USB signature tablet connects to any USB port on your computer. During initial installation, you will be prompted to

install the USB driver from the enclosed disk. Note that the SignatureGem tablet is powered by the USB connector, so no external cable or wall adapter is required.

Fingerprint Capture Device

To install the CROSSMATCH Technologies Inc. Model V300 USB fingerprint capture device, attach the USB to any available USB port. Insert the install CD and follow the on-screen instructions.

Appendix D

SQL and Boolean Operators

Operator	Description	Example	Explanation
<	This means, “is less than.” This operator can be used with text, numbers or dates.	LastName < “S”	Returns all last names between A and R
		BirthDate < #1/1/55#	Returns everyone who was born before 1/1/55
		PrintCount < “3”	Returns everyone whose badge was printed less than three times
>	“This means “is greater than.” This operator can be used with text, numbers or dates. “	LastName > “S”	Returns all last names between T and Z
		BirthDate > #1/1/55#	Returns everyone who was born after 1/1/55
		PrintCount > “3”	Returns everyone whose badge was printed more than three times

Operator	Description	Example	Explanation
<= and >=	This means “less than or equal to” and “greater than or equal to.”		
=	This means, “equals to” or “same as.” This operator can be used with text, numbers, or dates.	LastName = “Hutchinson”	Returns all records where the last name is Hutchinson
<>	This means, “does not equal.” This operator can be used with text, numbers, or dates.	BadgeType <> “Active”	Returns all records whose badges are not currently assigned an “active” status
AND	When searching for more than one variable, use “AND” to separate two or more “tests. The search will yield a result if both conditions have been met.	BadgeType = “Level 3” AND Department = “Engineering”	Will find all individuals who were issued a “Level 3” badge and belong to the Engineering department
BETWEEN	This allows you to search for a range of values; this operator can be used with text, numbers or dates	BirthDate BETWEEN #1/1/55# and #12/31/55#	“Will find all individuals who were born between January 1, 1955 and December 31, 1955. (Dates must be enclosed with ““pound”” signs.)”
NOT	Use the Not operator to evaluate the opposite condition (that is, whether expression lies outside the range)	Birthdate NOT BETWEEN #1/1/55# and #12/31/55#	Will find all individuals born before 1/1/55 and after 12/31/55.

Operator	Description	Example	Explanation
OR	This allows you to search for multiple values. The search will yield a result if either of the conditions you specify have been met	(Company = NULL or BadgeStatus = “Expired”)	Returns all records whose Company field is empty and all records whose badge status is “expired.” (When using the OR function, the expression must be enclosed within parentheses ().)
LIKE	The “LIKE” operator searches for data strings that contain data like the data you specify. The LIKE function can be used with a variety of special characters:		
	LIKE “a*a”	finds data beginning and ending with the letter “a”	
	LIKE “*ab*”	finds data with the letters “ab” embedded anywhere within it	
	LIKE “ab*”	finds any string beginning with the letters “ab”	
	LIKE “a?a”	finds any strings beginning and ending with “a” and any character (letter, number, character) between them	
	LIKE “a#a”	finds any strings beginning and ending with “a” containing a single number between them	
	LIKE “[a-z]”	finds any string beginning with the letters a through z	
	LIKE “[!a-z]”	finds any string that lies outside the range of a through z, e.g., “9,” “&,” “%”	
	LIKE “[!0-9]”	finds any string that lies outside the range of 0 through 9, e.g., “a,” “&,” “~”	

Appendix E

IIF Statements

The IIF function will operate on information you supply within the parentheses. The commas within the parentheses separate the three parts of the IIF function, which are: (argument, result1, result2). If the IIF function were "spoken in plain English," it would sound like this: "If such and such a condition is true, then automatically generate this response; otherwise, if the condition is not true, generate this alternate response." The "such and such condition," "this response," and "alternate response" in the plain English sentence above is what gets placed within the parentheses of the IIF statement.

After "IIF (, ,)" has been entered in the Expression Builder Edit window, click your mouse between the open parenthesis and the first comma. This is where you will enter the "argument." Arguments typically compare the data from a specified database field with a value that you supply within this parenthesis. For example:

- [company] = "Delta"
- [PrintCount] > "2"
- [ExpDate] BETWEEN #01/01/1999# AND #12/31/1999#

Note that the first word in these examples is the actual name of a database field; database fields must always be enclosed within square brackets ([ ]). The field name is followed by a Boolean operator (=, <, >, And, etc.); the Boolean operator describes how you want the data in the database field compared to the value you

will supply next. The final element of the argument is the actual data (text, dates, or numbers) which you will specify. Therefore, you may create any “argument” or “condition” that you want. Do you want something to be inserted on a badge if the individual’s company equals “Delta”? Do you want something to be printed on the badge if the badge has been printed more than two times? Expression Builder will “test” this argument...it will look at the contents of any database field you specify here, and see if it matches the data you instructed it to compare it to. If the actual database field contents match what you supply in the argument, Expression Builder will insert whatever you supplied for “result1” onto the badge; if there isn’t a match, Expression Builder will print whatever you specified for “result2.”

An example of an argument is:. you're willing to print your employees' first three badges at company expense, but that they must pay $15 for each additional badge if they become lost or damaged. You want to make a visible reminder on the badge so employees will be more careful. So, if the badge has been printed two times or more already, you want the following message to be printed on the badge: "You will have to pay for your next badge!" The example argument for this is as follows:

PrintCount >= “2”

PrintCount is the name of an actual database field which keeps a running count of the number of times a badge has been printed. >= (the “greater than” and “equals” signs) means “is greater than or equal to.” You manually type the number 2 and enclose it within quotation marks. (Literal text or values that *you* supply must be enclosed within quotation marks.)

In the Expression Builder’s Edit window, after you have inserted the IIF function, click your mouse after the “open parenthesis,” but before the first comma, and type your argument:

[PrintCount] >= “2”

The Edit window should display:

IIF ([PrintCount] >= “2”, ,)

Now that the “argument” is created, you must tell Expression Builder what to do if the argument passes or fails. The syntax of the IIF statement, remember, is IIF (argument, result1, result2). “Result1” is the “true” result...what should happen if Expression Builder indeed finds records whose PrintCount is greater than or equal to 2. (In this case, the result you want is text displayed on the badge.) Therefore,

click your mouse between the first and second commas embedded within the parentheses and type (with quotation marks): “You will have to pay for your next badge reprint!” (This message will be displayed on every badge that has been printed 2 or more times.)

If the argument fails, that is, if the badge has NOT been printed 2 or more times, you don’t want anything printed on the badge. Therefore, click your mouse in the space after the second comma, and before the closing parenthesis, and type two double-quotes (““). Two double-quotes, with nothing entered between them, equals “nothing” in Expression Builder.

Your finished IIF statement looks like the following:

IIF ([PrintCount] >= “2”, “You will have to pay for your next badge reprint!”, ““)

A variation of this may be that you want to indicate on the badge if the portrait image is older than, say, 12 months. You can create an argument that compares the date an image was last captured with an arbitrary test date. If the difference is greater than 12 months, you want the word "Dated!" to be displayed on the badge underneath the portrait image. The expression would look like the following:

IIF([ImageDate] < #01/01/1999# , “Dated!” , “”)

ImageDate is a database field that appears when you click the ADD DATABASE FIELD button. The application automatically records the date whenever an image is captured. The “less than” operator is used because dates going backward (in the past) are numerically less than today or future dates. We arbitrarily pick a date from 12 months ago-images captured earlier than that will be flagged. Note that dates must be enclosed within pound signs (#). And if you set your “Short date format” in Windows Regional Control Panel to a 4-digit year, you must enter a 4-digit year. If the argument is true, we want the word “**Dated!**” to be displayed underneath the portrait. If the argument doesn’t pass (because the portrait is more recent than 1/1/99), nothing will be printed.

After you close Expression Builder, the text object will display the actual expression within the object boundary. (If Preview has been enabled on the View menu, the data specified for “result1” or “result2” will be displayed.) Double-click on the text object in the Badge Layout window to open the Properties of Text dialog. Edit the text’s font, size, weight, color, etc. Reposition the text object so it appears below the portrait.

Appendix F

Input Masks & Field Formatting

Input Masks

An input mask is used in text fields to format data and provide some control over what values can be entered. An input mask consists of literal characters (such as spaces, dots, dashes, and parentheses) that separate blanks to fill in. The Input Mask property setting consists of literal characters along with special characters that determine the kind of value that can be entered into the blank in that position. Input masks are primarily used in Text and Date fields, but can also be used in Number fields. (Note: Expression Builder's use of Format Characters is sometimes inconsistent with Microsoft Access 2000.)

The following table shows some useful input mask definitions and examples of values you can enter into them. Refer to the table at the end of this topic for details on the codes used to create input mask definitions.

Input mask definition	Examples of values
(000) 000-0000	(206) 555-0248
(999) 999-9999!	(206) 555-0248
	( ) 555-0248
(000) AAA-AAAA	(206) 555-TELE
#999	-20 to 2000
>L????L?000L0	GREENGR339M3
	MAY R 452B7
>L0L 0L0	T2F 8M4
00000-9999	98115-
	98115-3007
>L<??????????????	Maria
	Pierre
ISBN 0-&&&&&&&&&-0	ISBN 1-55615-507-7
	ISBN 0-13-964262-5
>LL00000-0000	DB51392-0493

The input mask definition can contain up to three sections separated by semicolons; for example, (999) 000-0000!;0;" ".

Section	Meaning
First	The input mask itself.
Second	Determines whether to store the literal display characters. 0 = store literal characters with the value entered 1 or leave blank = store only characters entered in blanks
Third	Character that is displayed for blanks in the input mask. You can use any character; type " " (double quotation marks, space, double quotation marks) to display a space. If you leave this section blank, the underscore (_) is used.

When you create an input mask, you can use special characters to require that certain data be entered (for example, the area code for a phone number) and that other data be optional (such as a telephone extension). These characters specify the type of data, such as a number or character, that you must enter for each character in the input mask.

You can define an input mask by using the following characters:

Character	Description
0	Digit (0 through 9, entry required; plus [+] and minus [-] signs not allowed).
9	Digit or space (entry not required; plus and minus signs not allowed).
#	Digit or space (entry not required; blank positions converted to spaces, plus and minus signs allowed).
L	Letter (A through Z, entry required).
?	Letter (A through Z, entry optional).
A	Letter or digit (entry required).
a	Letter or digit (entry optional).
&	Any character or a space (entry required).
C	Any character or a space (entry optional).
. , : ; - /	Decimal placeholder and thousands, date, and time separators. (The actual character used depends on the regional settings specified by double-clicking Regional Settings in the Windows Control Panel.)
<	Causes all characters that follow to be converted to lowercase.
>	Causes all characters that follow to be converted to uppercase.
!	Causes the input mask to display from right to left, rather than from left to right. Characters typed into the mask always fill it from left to right. You can include the exclamation point anywhere in the input mask.
\	Causes the character that follows to be displayed as a literal character. Used to display any of the characters listed in this table as literal characters (for example, \A is displayed as just A).
Password	Setting the Input Mask property to the word Password creates a password entry text box. Any character typed in the text box is stored as the character but is displayed as an asterisk (*).

When you type data in a field for which you've defined an input mask, the data is always entered in Overtype mode. If you use the BACKSPACE key to delete a character, the character is replaced by a blank space.

If you move text from a field for which you've defined an input mask onto the Clipboard, the literal display characters are copied, even if you have specified that they not be saved with data.

Note: Only characters that you type directly in a database field are affected by the input mask. Microsoft Access ignores any input masks when you import data from an external source.

When you've defined an input mask and set a Format property for the same field, the Format property takes precedence when the data is displayed. This means that even if you've saved an input mask, the input mask is ignored when data is formatted and displayed. The data in the underlying table itself isn't changed; the Format property affects only how the data is displayed.

Field Formatting

The Format property affects only how data is displayed. It doesn't affect how data is stored.

You can use the following symbols in custom formats for any data type:

Symbol	Meaning
(space)	Display spaces as literal characters.
"ABC"	Display anything inside quotation marks as literal characters.
!	Force left alignment instead of right alignment.
*	Fill available space with the next character.
\	Display the next character as a literal character. You can also display literal characters by placing quotation marks around them.
[color]	Display the formatted data in the color specified between the brackets. Available colors: Black, Blue, Green, Cyan, Red, Magenta, Yellow, White.
@	Text character (either a character or a space) is required.
&	Text character is not required.
<	Force all characters to lowercase.
>	Force all characters to uppercase.

When you have defined an input mask and set the Format property for the same data, the Format property takes precedence when the data is displayed and the input mask is ignored. For example, if you create a Password input mask and also set the Format property for the same field, the Password input mask is ignored and the data is displayed according to the Format property.

Custom formats for Text fields can have up to two sections. Each section contains the format specification for different data in a field.

Section	Description
First	Format for fields with text.
Second	Format for fields with zero-length strings and Null values.

For example, if you have a text field in which you want the word “None” to appear when there is no string in the field, you could type the custom format @;”None” as the control’s Format property setting. The @ symbol causes the text from the field to be displayed; the second section causes the word “None” to appear when there is a zero-length string or Null value in the field.

Appendix G

Best Practices

Repair and Compact

One of the simplest ways to recover from what at first seems like a near disaster is to perform a "repair and compact" from Windows desktop. ID Card Maker's Technical Support department receives numerous calls for help for which a simple solution is given: exit out of ID Card Maker if it is currently open, and from Windows Start button, navigate to the ID Card Maker program group and run Repair ID Card Maker App and Repair ID Card Maker Dat . The "App" is the application itself. The "Dat" is the database table containing all the actual data. (You will learn how to do this in “Repairing and Compacting” on page 145.)

We recommend that you run the "repair and compact" utilities weekly. It may prevent crashes from occurring, keep your database clean, and help you recover when the program appears to be acting strangely.

Temp Folder

The Temp folder is a folder inside the Windows directory on your hard drive where many programs store files that are used only temporarily. Programs that create these files are supposed to delete them when they are no longer needed. Before deleting files, ensure that no other applications are running.

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